# Model exam

2- Choose the correct answer :

1) The angle whose measure 50° complements the angle whose measure ....°

    a) 40°   b) 130°   c) 50°   d) 180°

2) The measure of the vertically opposite angle of an angle of measure 70° is ....°

    a) 20°   b) 70°   c) 110°   d) 290°

3) A B C is an aright angled triangle at B , A B = 3 cm , B C = 4 cm then $(AC)^2 = ...$ cm²

    a) 2.5   b) 16   c) 5   d) 25

4) If L_1 // L_2 and $L_1 \perp L_3$ then ....

    a) L_1 // L_3 b) $L_2 \perp L_3$ c) $L_1 \perp L_2$ d) L_1 intersects L_2

5) $\overline{AB}$ .... $\overrightarrow{AB}$

    a) $\in$ b) $\notin$ c) $\subset$ d) $\not\subset$

6) **In the opposite figure :**

$\overrightarrow{AB}$ // $\overrightarrow{CD}$ then x = ...

    a) 120°   b) 100°   c) 60°   d) 30°
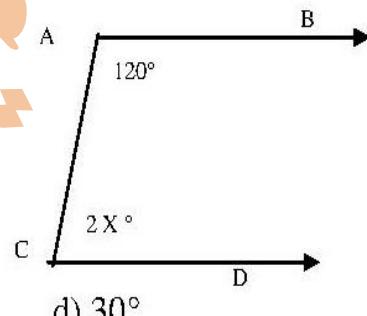
2- Complete :

a) The angle whose measure is 70° supplementary the angle whose measure is ....°

b) If m (∠ A B C) = 120° then m (reflex ∠ A B C) = ...°

c) If Δ A B C ≡ Δ X Y Z then A C = ...

d) If a st. line intersects one of two parallel st. lines then ....

e) The sum of measure of the accumulative angles at a point equals ....°

f) In the opposite figure :

D ∈ $\overleftrightarrow{AB}$ then X = ...°
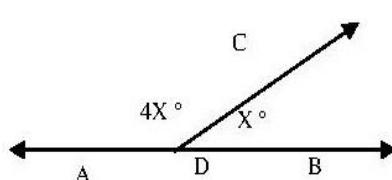
**3- a) In the opposite figure :**

$A \in \overline{CE}$, $\overrightarrow{EH} // \overrightarrow{AD}$, $m(\angle E) = 115°$,

$m(\angle BAD) = 45°$, $m(\angle C) = 65°$

(i) is $\overrightarrow{EH} // \overline{CB}$? Why ?

(ii) Find : $m(\angle CAB)$
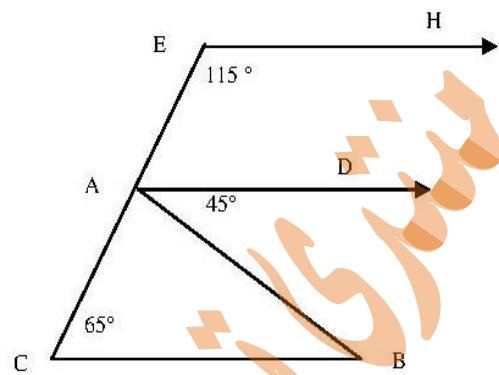
b) In the opposite figure:

$m(\angle B) = 90°$, $m(\angle D) = 90°$

$AB = 7$ cm , $BC = 24$ cm , $AD = 15$ cm

Find $(CD)^2$
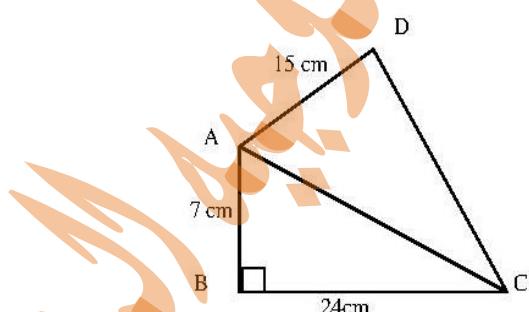
4- a) Using the geometric instruments draw ΔABC in which $AB = AC = 5$ cm and

$BC = 6$ cm draw $\overrightarrow{AD} \perp \overline{BC}$ to cut BC at D. Find the length of $\overline{AD}$ and the area of

ΔABC

b) In the opposite figure :

Prove that : $\Delta ABC \equiv \Delta EFD$

and find : $m(\angle D)$ and DF
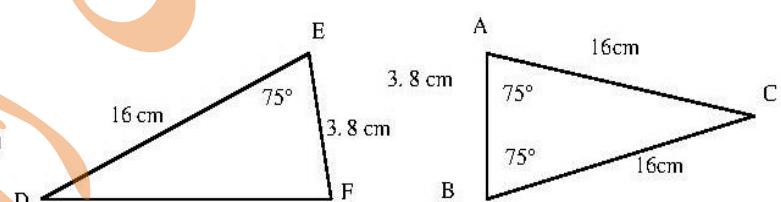
5- a) In the opposite figure :

$m(\angle A) = 100$, $\overline{BD}$ bisects $(\angle CBA)$,

$m(\angle BDC) = 125°$ find : $m(\angle C)$
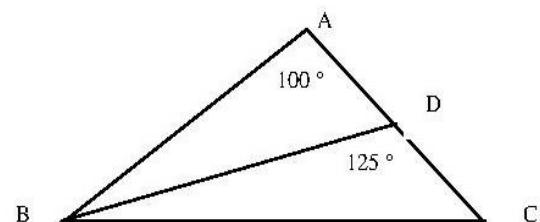
b) In the opposite figure :

$\overline{AB} \cap \overline{CD} = \{ M \}$, $AM = BM$ and

$CM = DM$

is $\Delta AMC \equiv \Delta BMD$? Why ?
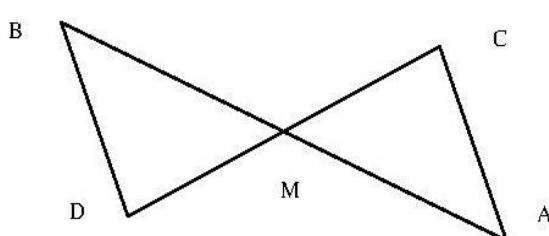
Exam (1)

1	The measure of each of two equal complementary angles equals .... (180° , 45° , 360° , 90°)
2	If two straight lines intersect , then each two .... angles have the same measure (vertically opposite , adjacent , alternate , corresponding)
3	If $\triangle ABC \equiv \triangle LMN$, then $m (\angle ACB) = m (\angle ....)$ (LMN , MLN , LNM , NLM)
4	$\overrightarrow{AB} \cup \overrightarrow{AC} = ...$ ($\overrightarrow{AB}$, $\angle ABC$, $\angle BAC$, Ø)
5	Two adjacent angles formed by a straight line and a ray with a starting point on this straight line are .... (equal in measure , complementary , supplementary , adjacent)
6	If straight lines cuts two parallel lines then each two corresponding angles are .... (supplementary , complementary , equal in measure , right)
7	If two straight lines are perpendicular to a third , then the two straight lines are .... (intersecting , congruent , parallel , perpendicular)
8	$\overleftrightarrow{AF}$ // $\overline{DE}$ // $\overline{BC}$, AE = EC , then AD : AB = ... (2 : 1 , 3 : 2 , 1 : 3 , 1 : 2)
9	If the two adjacent angles are complementary , then their outer sides ....
10	If $m (\angle A) = 125°$, then $m (reflex \angle A) = ...$
11	Two angles are congruent if ....
12	The perpendicular bisector of a line segment is called ....
13	the value of $x = ...$
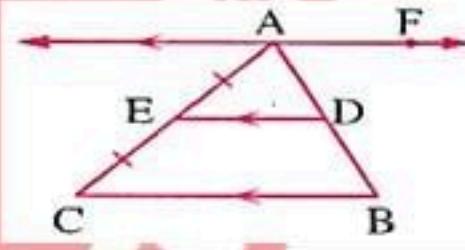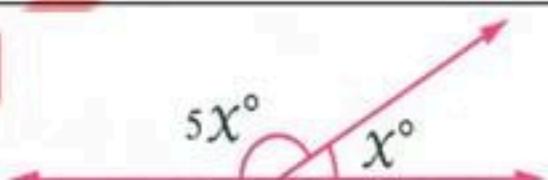
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1	$\overrightarrow{BA}$ // $\overrightarrow{CD}$ // $\overrightarrow{EF}$, m (∠ ABC) = 83° **Find with giving the reason :** m (∠ DCE) , m (∠ CEF) ....
2	AB = AC , BD = CD , m (∠ BAD) = 30° ① Does △ ADC ≡ △ ADB ? Why ? ② Find : m (∠ BAC) ....
3	$\overrightarrow{AF}$ // $\overrightarrow{ED}$ // $\overrightarrow{YX}$ // $\overrightarrow{CB}$, AD = DX = XB , AC = 9 cm. **Find :** The length of $\overline{AY}$ ....
4	$\overrightarrow{AB}$ // $\overrightarrow{CD}$, m (∠ D) = 70° , m (∠ A) = 110° **Does :** $\overrightarrow{AC}$ // $\overrightarrow{DE}$? Why ? ....
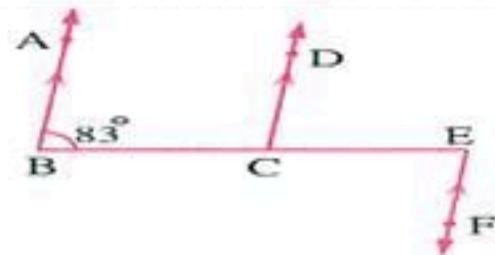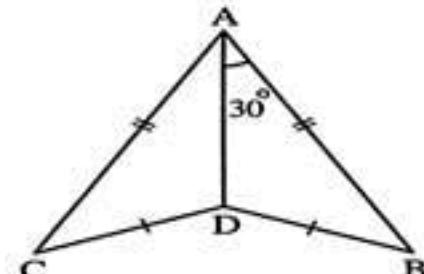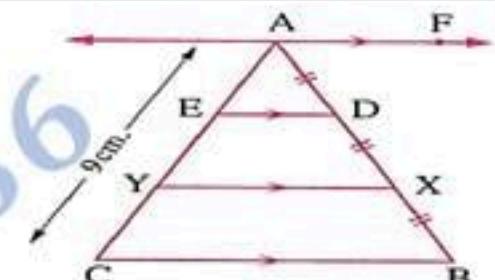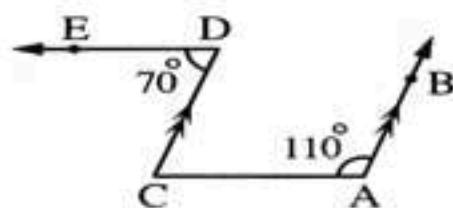
5	$\overrightarrow{CD}$ // $\overrightarrow{BA}$, m ($\angle$ C) = 90° , $\overrightarrow{BH}$ bisects $\angle$ ABO Find : m ($\angle$ OBH) , give reason.
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	....
	....
6	*mention two cases of congruency of two triangles*
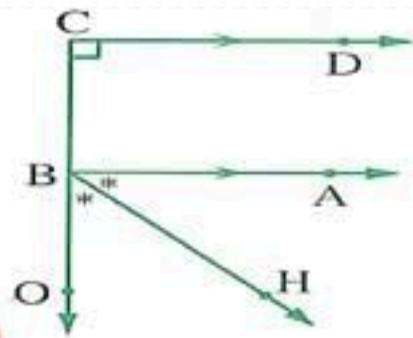
Exam (2)

1	*the two angles of measures 40 ,50 are ....* (*complementary , supplementary , reflex , obtuse*)
2	*in the opposite figure* : $x =$ .... (*a*) 5 (*b*) 60 (*c*) 25 (*d*) 45
3	*If m ($\angle$ X) = 2 m ($\angle$ Y), $\angle$ X and $\angle$ Y are two supplementary angles , then m ($\angle$ Y) =* .... (90° , 120° , 30° , 60°)
4	*If $\overline{AB} \equiv \overline{CD}$ and AB = 4 cm., then AB + 2 CD =* ....*Cm.* (10 , 4 , 8 , 12)
5	*If m ($\angle$ A) = 110°, then m (reflex $\angle$ A) =* .... (70° , 360° , 250° , 150°)
6	*The sum of measures of accumulative angles at point equal the sum of measures of* ....*angles* (360 , 4 right , 90 ,5 right)
7	*If two triangles ABC and XYZ are congruent ,then* .... (BC = XZ , YX = CA , ZY = CB , AB = YZ)
8	*Two complementary angles are two angles whose sum of their measures is* .... (90° , 180° , 100° , 45°)

9	if $\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \emptyset$, then $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ are ....
10	if the area of a rectangle is $20 \ cm^2$, its width is $4 \ cm$, then the perimeter of the rectangle is .... cm
11	If $L_1 \perp L_2$ and $L_2 \ // \ L_3$, then L_1 .... L_3
12	the value of $x = $ ....
13	$\overrightarrow{AB} \cup \overrightarrow{AC} = \angle$ ....
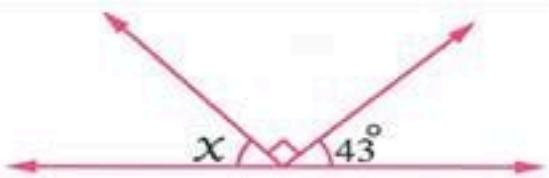
Answer the following

1	$\overrightarrow{BD}$ bisects $\angle ABC$, $m(\angle DBC) = 35°$, $m(\angle BDC) = 120°$ Find : $m(\angle C)$, $m(\angle ABC)$ and $m(\angle A)$
2	$\overrightarrow{AB} \ // \ \overrightarrow{CD} \ // \ \overrightarrow{EF}$, $m(\angle EAB) = 112°$, $m(\angle CEF) = 36°$ Find : $m(\angle AEC)$, $m(\angle C)$
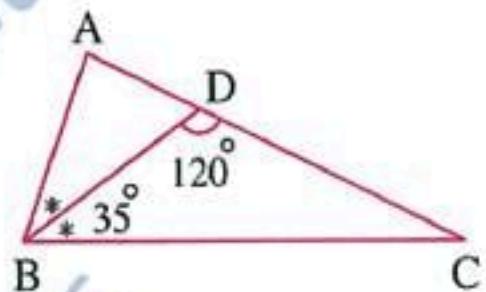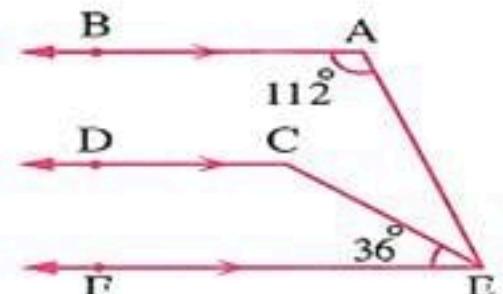
3	$\overline{AB} \mathbin{/\mkern-5mu/} \overline{CD} \mathbin{/\mkern-5mu/} \overline{EF}$, $AC = CE$, $BF = 10$ cm. **Find by reason :** The length of $\overline{BD}$

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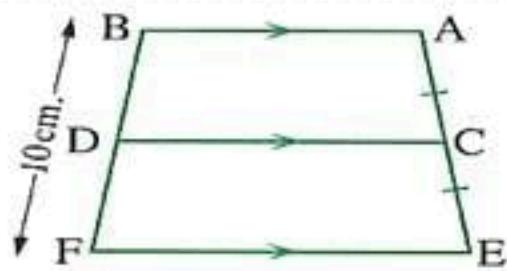
4	$m (\angle YXZ) = 90°$, $m (\angle ZXL) = 50°$ and $m (\angle LXE) = 110°$ **Find with giving the reason :** $m (\angle YXE)$

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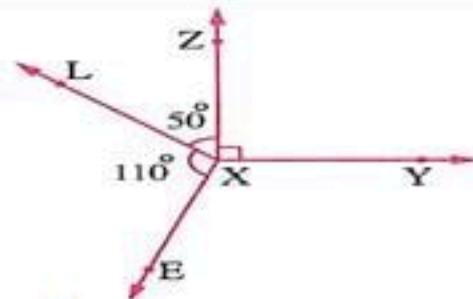
5	$m (\angle A) = m (\angle C) = 90°$, $m (\angle ABD) = 31°$, $AB = CB = 5$ cm. , $AD = 3$ cm. ① Is $\triangle ABD \equiv \triangle CBD$? Why ② **Find :** $m (\angle ADC)$

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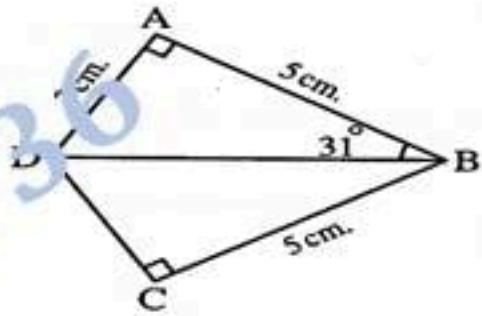
6	*Draw $\overline{AB}$ where $AB = 5$ cm ,using ruler and compasses draw the axis of symmetry of $\overline{AB}$ (Do not remove the arcs)*

Exam (3)

1	$\overline{XY}$ .... $\overleftrightarrow{XY}$	($\in$ or $\subset$ or $\notin$ or $\not\subset$)
2	The acute angle supplements .... angle (an obtuse , an acute , a reflex)	
3	The two straight lines parallel to a third straight line are .... (intersecting , congruent , parallel , perpendicular)	
4	If straight lines intersects two parallel straight lines ,then each two interior angles in the same side of the transversal are .... (supplementary , complementary , equal in measure , right)	
5	The axis of symmetry of a line segment is .... (perpendicular from mid point , equal to it , parallel to it , congruent to it)	
6	The two bisector of two adjacent supplementary angles .... (parallel , perpendicular , coincident , congruent)	
7	If the two outer sides of two adjacent angles are on the same straight line , then these two adjacent angles are	
8	The type of the angle of measure $179° 60'$ is	
9	The two line segment are congruent if	
10	If $\Delta ABC \equiv \Delta XYZ$, $m (\angle A) + m (\angle B) = 115°$, then $m (\angle Z) = $	
11	If $\angle B$ complement $\angle A$ and $\angle B \equiv \angle A$, then $m (\angle B) = $	
12	The two adjacent angles formed by intersecting of a straight line and a ray with a start point on this straight line are	
13	$\overleftrightarrow{AC} \cap \overrightarrow{BD} = \{B\}$, $m (\angle ABD) = 50$ $m (\angle DBC) = 2x$, find the value of x	
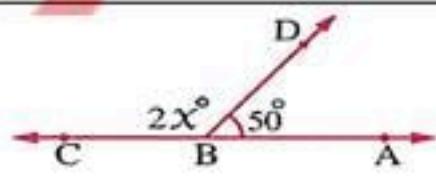
1	$\overrightarrow{AB} \cap \overrightarrow{CD} = \{E\}$, $AE = BE$, $CE = DE$, $m(\angle C) = 50°$ ① Is $AC = BD$? Why ? ② Find : $m(\angle D)$
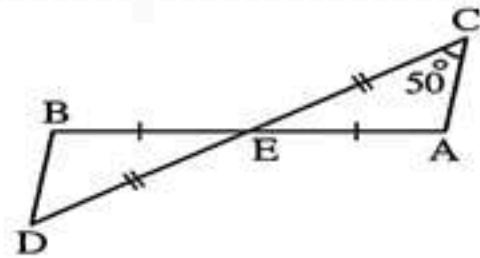
2	$\overrightarrow{AB} \parallel \overrightarrow{CD} \parallel \overrightarrow{EF}$, $m(\angle A) = 45°$, $m(\angle E) = 130°$ Find : $m(\angle ACE)$
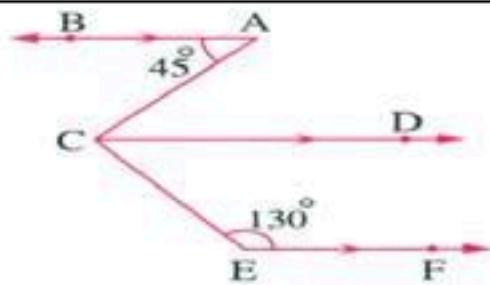
3	$\overrightarrow{AB} \cap \overrightarrow{DF} = \{M\}$, $\overrightarrow{ME}$ bisects $\angle AMD$, $m(\angle FMB) = 70°$ Find : ① $m(\angle AMF)$ ② $m(\angle AMD)$ ③ $m(\angle DME)$
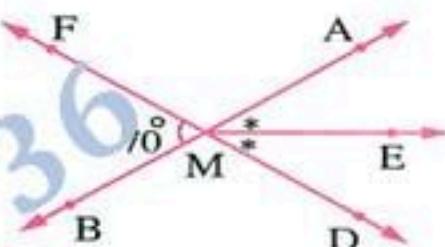
4	$\overrightarrow{AB} \parallel \overline{DC}$, $m(\angle BAC) = 60°$, $m(\angle CDE) = 120°$ ① Find giving reason : $m(\angle ACD)$ ② Is $\overrightarrow{DE} \parallel \overline{CA}$? why ?

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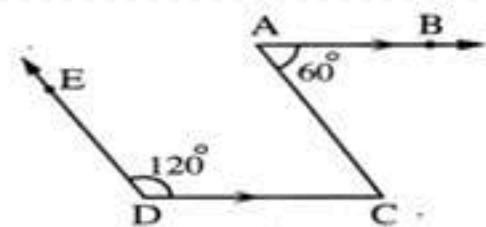
5	$\overrightarrow{AB}$ // $\overleftrightarrow{CD}$ // $\overleftrightarrow{EF}$, AC = CE , DB = 5 cm. **Find :** The length of $\overline{BF}$, by giving the reason. ....
6	*By using your geometric instruments ,draw ∠ ABC of measure 110 , then draw $\overrightarrow{BF}$ to bisect the angle*
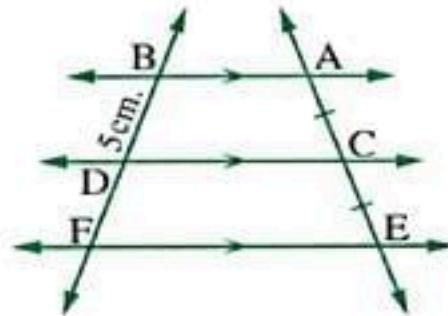
Exam (4)

1	*The type of the angle of measure 89° 60' is ....* (*an obtuse , an acute , a right , a straight*)
2	*the angle of measure 70 is vertically opposite to an angle of* *measure ....* (20 , 110 , 70 , 360)
3	*If Δ ABC ≡ Δ XYZ , m (∠ A) + m (∠ B) = 100° , then m (∠ Z) = ...°* (50 , 80 , 90 , 100)
4	*the angle of measure x complements the angle of measure ....* (180 − x , 90 − x , 360 − x , 90 + x)
5	*The measure of the supplement of the angle whose measure 30°* *= ....* (60° , 180° , 90° , 150°)
6	*The whose measure is more than 90° and less than 180° is .... angle* (*an obtuse , an acute , a right , a straight*)
7	*If L_1 , L_2 and L_3 are straight lines , $L_1 \perp L_3$, $L_2 \perp L_3$, then L_1 .... L_2* (// , ⊥ , coincides , intersects)
8	*If the two adjacent angles are supplementary ,then their outer sides* *.................*

9	If $\triangle ABC \equiv \triangle XYZ$, $m(\angle B) = 80°$, $m(\angle Z) = 40°$, then $m(\angle A)$ = ...
10	The right angle complements .... angle and supplements .... angle
11	If a straight lines intersects two parallel straight lines, then every two alternate angles are ....
12	the value of x = ...
13	if $\angle X \equiv \angle Y$, $\angle X$, $\angle Y$ are supplementary angles, then $m(\angle X)$ = ...

Answer the following

1	$AC = BD$, $AB = CD$, $m(\angle ABC) = 50°$ and $m(\angle ACB) = 35°$ (1) Study the congruence of $\triangle ABC$ and $\triangle DCB$ (2) Find : $m(\angle D)$ ....
2	$\overrightarrow{AD} // \overline{BC}$, $m(\angle DAC) = 35°$, $m(\angle EAD) = 60°$ Find the measure of the interior angles of $\triangle ABC$ ....
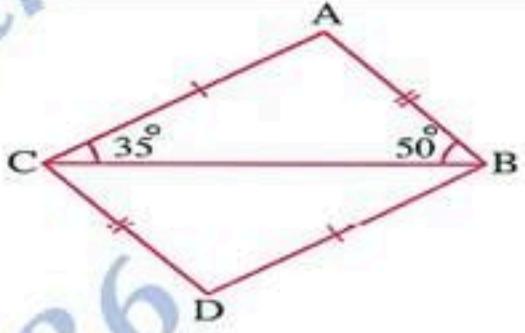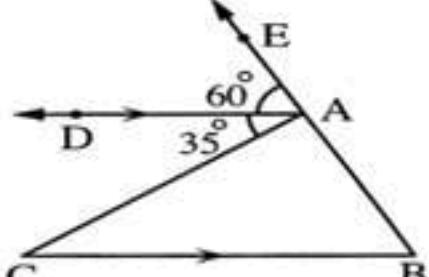
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3	$\overrightarrow{AB} \parallel \overleftrightarrow{CD}$, $\overrightarrow{DE} \parallel \overrightarrow{CA}$ and m ($\angle$ EDC) = 70° **Find :** m ($\angle$ DCA) and m ($\angle$ BAF) (Give reason) ....
4	$\overrightarrow{OD}$ bisects $\angle$ BOE , $\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{O\}$, m ($\angle$ AOE) = 90° **Find :** m ($\angle$ AOC) ....
5	*Prove that* (1) $\triangle$ ROP = $\triangle$ SPO (2) $m (\angle RPS) = m (\angle SOR)$ ....
6	*Draw angle of measure* 120° *and divide it four equal angles in measure using a ruler and compasses* (*Don't remove the arcs*)
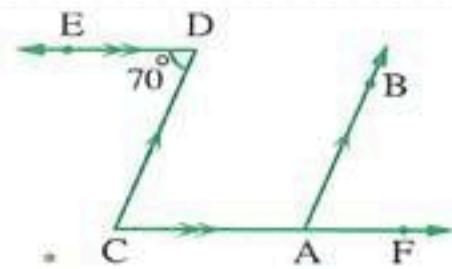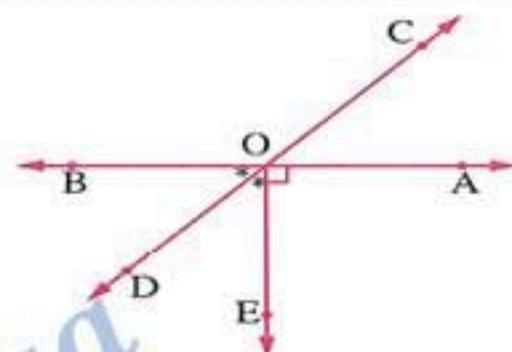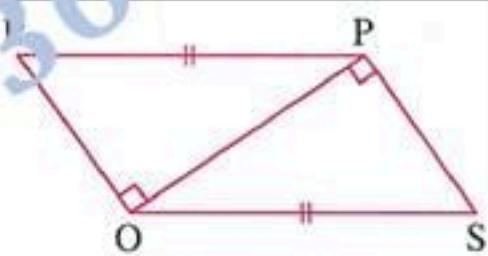
Exam (5)

1	if $\angle A$ complements $\angle B$, $\angle B$ complements $\angle C$, then $m(\angle A)$ .... $m(\angle C)$ ($>$, $<$, $=$, $\leq$)
2	the ratio between the measures of two supplementary angles is $4 : 5$, then the measure of the greater angle is .... (80 , 90 , 100 , 120)
3	if $\overrightarrow{XY}$ bisects $\angle LXN$, $m(LXY) = 60$, $m(\angle LXN) = $ .... (30 , 60 , 120 , 360)
4	The type of the angle of measure $179° 61`$ is .... (an obtuse , an acute , a reflex , a straight)
5	The sum of measures of the accumulative angles at a point $= $ .... ($630°$, $180°$, $90°$, $360°$)
6	If $\Delta ABC \equiv \Delta XYZ$, $m(\angle A) = 50°$, $m(\angle Y) = 60°$, then $m(\angle C)$ $= $ .... ($50°$, $60°$, $70°$, $80°$)
7	the triangle whose perimeter is 12 cm and the lengths of its two sides 2 cm , 5 cm is called .... (isosceles , equilateral , right , scalene)
8	if $\overline{XY} \equiv \overline{AB}$, $XY = 5cm$, then $XY + 3AB = $ .... (5 , 20 , 15 , 30)
9	the right angle supplements an angle of measure ....
10	two triangles are congruent if each .... of one triangle is equal to the corresponding part of the other triangle
11	if an angle of measure 57 comlements an angle of measure $3x$, then $x = $ ....
12	the square has .... axes of symmetry
13	the value of $x = $ ....
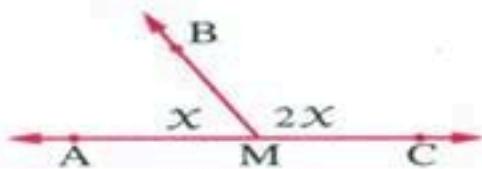
1	$\overrightarrow{AD} /\!/ \overrightarrow{BC}$, $\overrightarrow{CF}$ bisects $\angle DCE$, $m(\angle B) = 55°$, $m(\angle D) = 110°$ **Prove that :** $\overrightarrow{AB} /\!/ \overrightarrow{CF}$
2	ABC is an isosceles triangle and $\overline{AD} \perp \overline{BC}$ Why does $m(\angle C) = m(\angle B)$?
3	$\overleftrightarrow{AD} \cap \overleftrightarrow{BH} = \{M\}$, $m(\angle HMD) = 50$, $\overrightarrow{MC}$ bisects $\angle BMD$ $find : m(\angle AMC)$
4	$\overrightarrow{AB} /\!/ \overrightarrow{DC}$, $\overrightarrow{AD} /\!/ \overrightarrow{BC}$, $m(\angle BAD) = 63°$ **Find :** $m(\angle BCE)$ (Showing the steps)
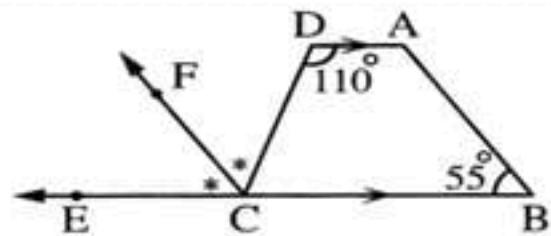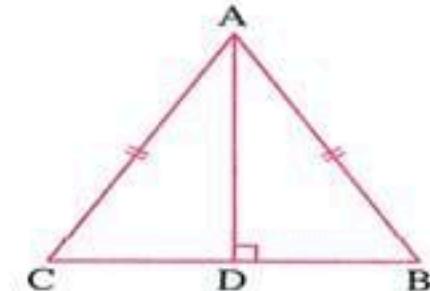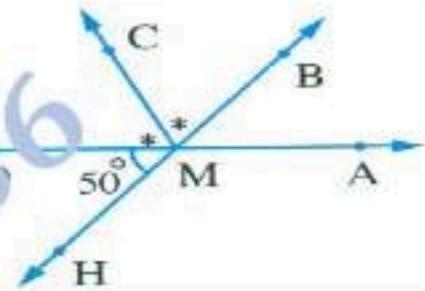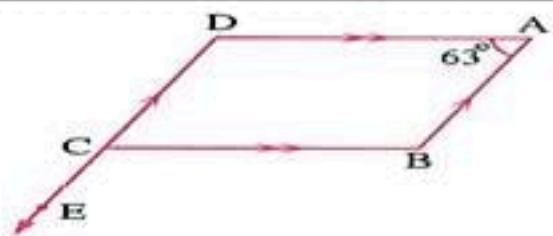
5	The polygon ABCF ≡ the polygon EDCF , m (∠ EFC) = 110° , BC = 5 cm. Find : **1** m (∠ AFC) , m (∠ AFE) , m (∠ FCB) **2** The length of $\overline{BD}$	

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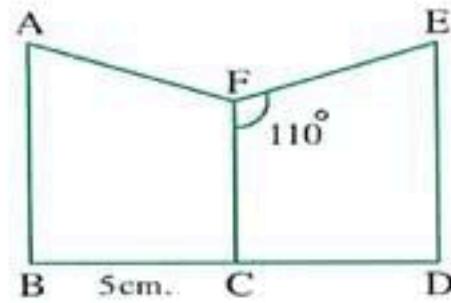
6	*using the geometric instruments , draw △ ABC in which BC = 6 cm , AB = AC = 5 cm , then draw $\overline{A\,D} \perp \overline{B\,C}$ where $\overline{A\,D} \cap \overline{B\,C} = \{D\}$, find the length of AD* (*Don't remove the arcs*)

Exam (5)

1	*The right angle complements angle whose measure is* .... ($0°$, $45°$, $90°$, $180°$)
2	*If △ ABC ≡ △ DEF , the perimeter of △ ABC = 18 cm , BC = 6 cm , then DE + DF = ... cm* (6 , 12 , 3 , 24)
3	*the rectangle has .... lines of symmetry* (zero , 2 , 3 , 4)
4	*the two diagonals are perpendicular in* .... (*rectangle , parallelogram , rhombus , trapezium*)
5	*if $\overline{AB} \equiv \overline{CD}$, then AB + CD =* .... (1 , 0 , 2 AB , CD)
6	*m (∠ A) + m(reflex ∠ A) =* .... (360 , 180 , 45 , 360)
7	*the two vertically opposite angles are* .... (*corresponding , congruent , supplementary , alternate*)
8	*if the ratio between the measures of two supplementary angles is 1 : 5 , then the measure of the greater angle is* .... (15 , 80 , 75 , 150)

9	the value of x = ...
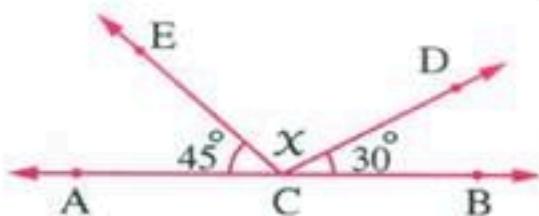
10	two triangles are congruent if two sides and .... of one triangle are congruent to the corresponding parts of the other triangle
11	if a straight line intersects two parallel straight lines , then each two corresponding angles are ....
12	the axis of symmetry of a line segment is ....
13	the two diagonals are perpendicular in .... and ....

Answer the following

1	$AD = AC$, $\overrightarrow{AB}$ bisects $\angle CAD$ (1) Prove that : $\triangle ACB \equiv \triangle ADB$ (2) If m ($\angle APD$) = 10° , find : m ($\angle CBD$)
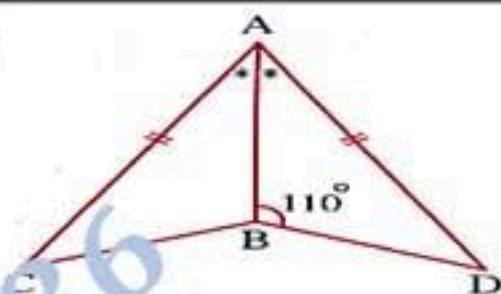
2	$\overleftrightarrow{AB} \cap \overleftrightarrow{CD}$ = { M } , m ($\angle CML$) = 90° , m ($\angle AMC$) = m ($\angle EMB$) Find: m ($\angle AMC$) , m ($\angle BMD$) , m ($\angle AMD$)
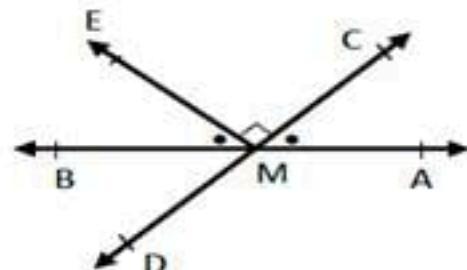
3	$\overrightarrow{AD}$ // $\overrightarrow{CB}$, $\overrightarrow{AD}$ bisects ∠ BAE and m (∠ B) = 51° Find: m (∠ BAD) , m (∠ C)

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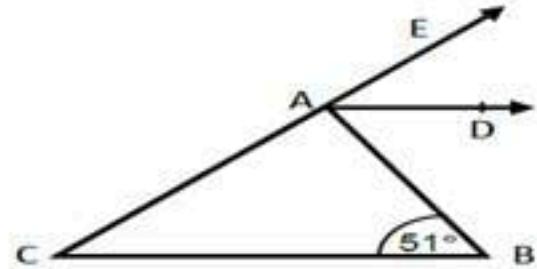
4	$\overrightarrow{AB}$ // $\overrightarrow{CD}$, $\overrightarrow{DE}$ // $\overrightarrow{AC}$, m (∠ D) = 65° **Find :** m (∠ C) , m (∠ A) (Show your steps)

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5	m (∠ X) = m (∠ L) = 90° , XY = ZL Why Δ XYZ ≡ Δ LZY ? (Give reasons)

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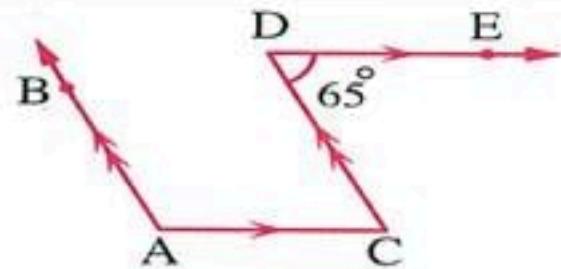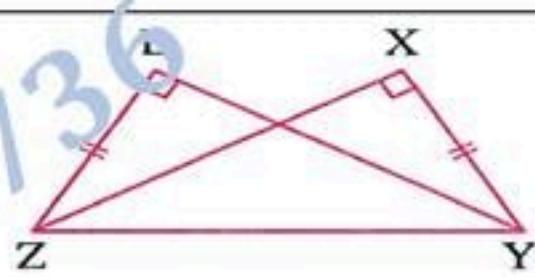
6	*Draw $\overline{XY}$ where $\overline{XY}$ = 6 cm ,using ruler and compasses draw the* *axis of symmetry of $\overline{XY}$ (Do not remove the arcs)*

Exam (7)

1	if $\triangle ABC \equiv \triangle LMN$, then $m (\angle ACB) = m (\angle \ldots\ldots)$ (LMN , MLN , LNM , NLM)
2	Any two line segments are congruent if they are equal in .... (measure , capacity , weight , length)
3	if $m (\angle A) = 2\, m (\angle B)$, $\angle A$ complements $\angle B$, then $m (\angle A) = $ .... (15 , 30 , 45 , 60)
4	A square of side length 7 cm , then its area = ... cm^2
5	the two diagonals are equal in length and perpendicular in .... (rectangle , parallelogram , rhombus , square)
6	if $AB = CD$, then $\overline{AB}$ .... $\overline{CD}$ (= , bisects , $\perp$, $\equiv$)
7	the measure of each of the two equal complementary angles = ... (180 , 45 , 360 , 90)
8	the acute angle complements .... angle (an acute , a right , an obtuse , a straight)
9	in the opposite figure : $\overrightarrow{AB}$ // $\overrightarrow{DE}$, then $x + y + z = $ ....
10	the perpendicular to one of two coplaner parallel straight line is .... to the other
11	A circle of radius 7 cm , then its area = ... cm^2 $(\pi = \frac{22}{7})$
12	Two triangles are congruent if two angles and ....
13	the value of $x = $ ....

1	$m(\angle ACE) = 30$, $m(\angle CEB) = 110$ *find* $m(\angle A)$

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2	$AB = AD$, $BC = 7$ cm., $m(\angle B) = 100°$ and $m(\angle BAC) = m(\angle DAC) = 30°$ ① Is $\triangle BAC \equiv \triangle DAC$? Why ? ② **Find :** $m(\angle ACD)$ and the length of $\overline{CD}$

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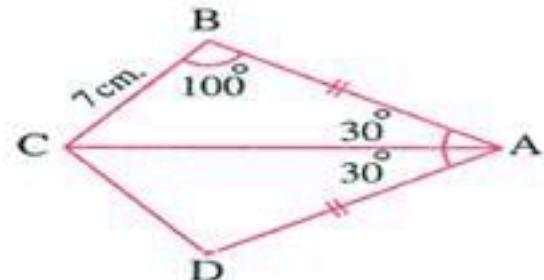
3	*find the value of x (give the reason)*

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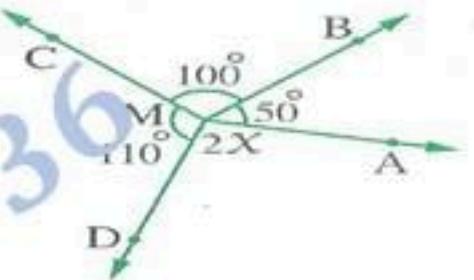
4	$\overrightarrow{AB} \parallel \overrightarrow{CD}$, $\overrightarrow{AB} \parallel \overrightarrow{EF}$, $m(\angle A) = 60°$, $m(\angle E) = 35°$ **Find :** $m(\angle ACE)$

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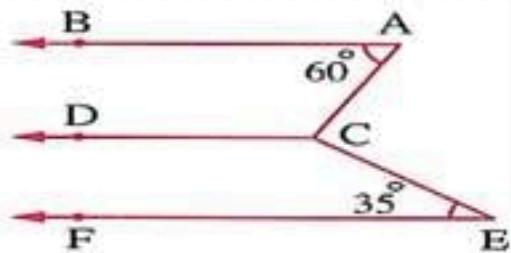
5	$\overleftrightarrow{AF} \parallel \overleftrightarrow{XY} \parallel \overleftrightarrow{DE} \parallel \overleftrightarrow{BC}$ and AY = YE = EC , AY = 3 cm . AX = 2 cm . the perimeter of △ ABC = 23 cm find BC	

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1	*if ∠ A complements ∠ B , ∠ B supplements ∠ C , m (∠ A) = 35 , then m (∠ C) = ...* (55 , 145 , 125 , 130)
2	*If m (∠X) + m (∠ Y) = 180° , then ∠ X and ∠ Y are ....* (equal in measure , complementary , supplementary , adjacent)
3	*the image of the point (−3 , 5) translation (0 , −10) is ....* ((3 , −5) , (−3 , −5) , (3 , 5) , (5 , −3))
4	*the angle whose measure is 95 60` supplements an angle of measure ....* (75 , 84 , 90 , 100)
5	*if m (∠ X) = 3 m (∠ Y) and ∠ X , ∠ Y are supplementary angles , then m (∠ X) = ...* (90 , 180 , 45 , 135)
6	*ABCD is a rectangle , then $\overline{BC}$ ≡ ....* ($\overline{AC}$, $\overline{BD}$, $\overline{AD}$, $\overline{DC}$)
7	*if L_1 , L_2 , L_3 are straight lines in the same plane , $L_1 \perp L_3$, $L_2 \perp L_3$, then ....* ($L_1 \parallel L_2$, $L_1 \perp L_2$, $L_1 \parallel L_3$, $L_2 \parallel L_3$)
8	*if the two vertically opposite angles are supplementay , then the measure of each angle is ....* (45 , 90 , 180 , 60)

9	the reflex angle is the angle whose measure is more than .... and less than ....
10	if the area of a square is $25cm^2$, then its perimeter = ... cm
11	if a line segment is extended from both sides to infinity, then it is called ....
12	if C is the mid point of $\overline{AB}$, then $\overline{AC} \equiv$ ....
13	the value of $x =$ ....
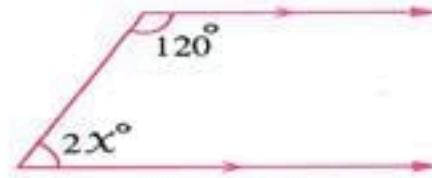
Answer the following

1	$\overrightarrow{BA} \parallel \overrightarrow{CE}$, m ($\angle$ A) = 48° D $\in \overrightarrow{BC}$, m ($\angle$ B) = 62° Find: m ($\angle$ ECD), m ($\angle$ ACE), and m ($\angle$ ACB)
2	ABC is a triangle, E is the midpoint of AC, $\overrightarrow{EF}$ intersects $\overline{AB}$ at F, m ($\angle$ AFD) = 122° and m ($\angle$ B) = 58° Is $\overrightarrow{EF} \parallel \overline{CB}$? Why ?
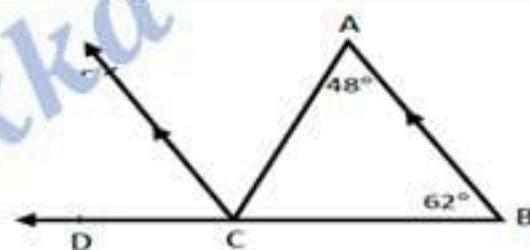
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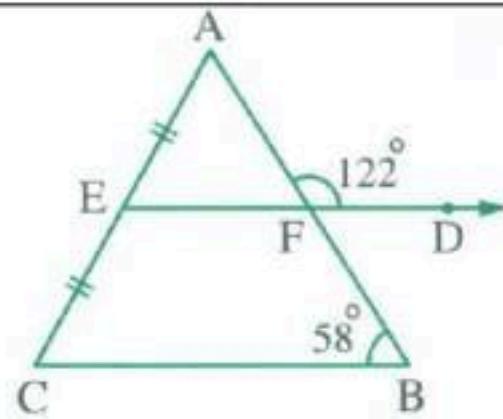
3	$\overrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$, $m(\angle AMC) = 40°$

and $\overrightarrow{MD}$ bisects $\angle$ BME

Find : $m(\angle AME)$

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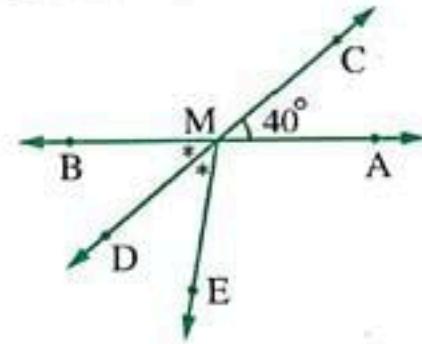
4	$\overrightarrow{AD} // \overrightarrow{BE}$

, $m(\angle F) = 80°$

, $m(\angle A) = 110°$ and $m(\angle ABF) = 150°$

Is $\overrightarrow{BE} // \overrightarrow{FC}$? (Give reason)

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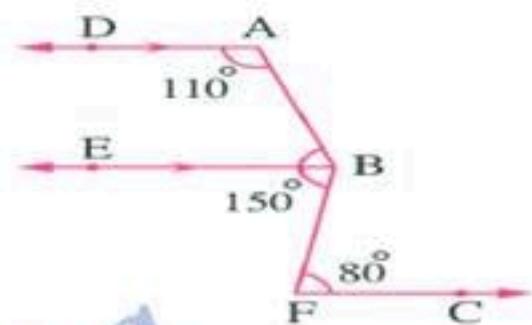
5	AC = AD , BC = BD

, $m(\angle ACB) = 100°$

, $m(\angle CAB) = 30°$

1 **Prove that :** $\triangle ABC = \triangle ABD$

2 **Find :** $m(\angle ABD)$

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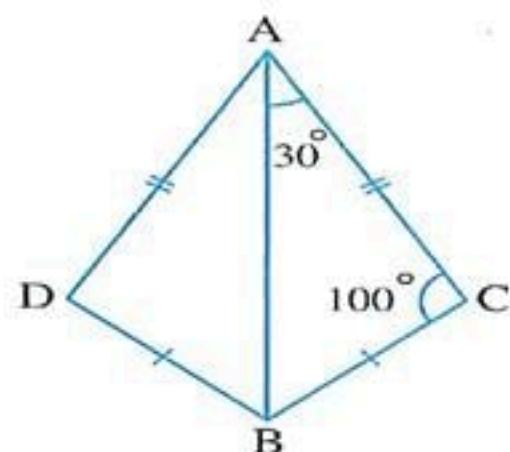
Exam (9)

1	if $\overrightarrow{BD}$ bisects ∠ ABC , then m (∠ ABD) .... m (∠ DBC) (= , < , ≡ , >)
2	the obtuse angle supplements .... angle (an acute , an obtuse , a zero , a right)
3	the perimeter of a square is 24 cm , then its area is .... cm^2 (8 , 9 , 3 , 36)
4	if $\overline{BC} \equiv \overline{XY}$, then BC ÷ XY = ... (2 , zero , 1 , XY)
5	the perpendicular bisector of a line segment is called .... (symmetry axis , parallel , intersecting line , median)
6	if ∠ X supplements ∠ Y , m (∠ X) = 60 , then m (reflex ∠ Y) = ... (120 , 180 , 240 , 300)
7	if the two vertically opposite angles are complementary , then the measure of each angle is .... (90 , 45 , 180 , 50)
8	the straight line which is perpendicular to one of two parallel straight lines is .... to the other straight lines in the plane (perpendicular , parallel , coincided , otherwise)
9	the obtuse angle is the angle whose measure is more than .... and less than ....
10	the two right angled triangles are congruent if .... , ... are congruent to their corresponding parts in the other triangle
11	the value of x = ... $80°$ $x°$
12	if the two lines L_1 , L_2 are two parallel lines , then $L_1 \cap L_2$ = ...
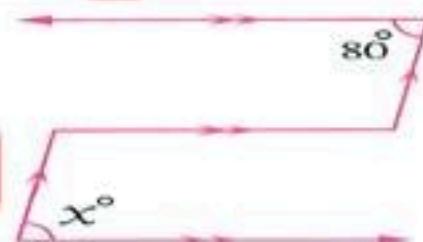
1	$AB = DE$ $, BC = AD , m (\angle CAB) = 57°$ Find the measures of the unknown angles in the triangle ADE ....
2	$\overrightarrow{BC} \mathbin{/\mkern-5mu/} \overrightarrow{EF} , m (\angle C) = 60°$ $, m (\angle ADF) = 140°$ **Find each of the following :** $m (\angle B)$ and $m (\angle A)$ ....
3	$\overrightarrow{BA} \mathbin{/\mkern-5mu/} \overrightarrow{CD} , \overrightarrow{CB} \mathbin{/\mkern-5mu/} \overrightarrow{DE}$ $, m (\angle B) = 110°$ **Find :** $m (\angle D)$ ....
4	$\overrightarrow{CD} \mathbin{/\mkern-5mu/} \overrightarrow{BA} , \overrightarrow{CB} \mathbin{/\mkern-5mu/} \overrightarrow{AE}$ $\overrightarrow{AF}$ bisects $\angle BAE$, and $m (\angle FAE) = 58°$ Find: $m (\angle C)$ ....
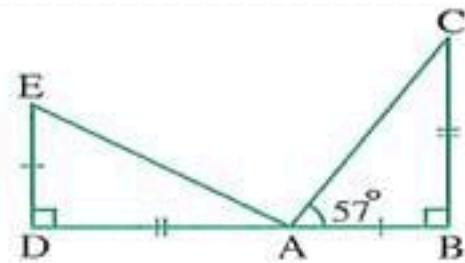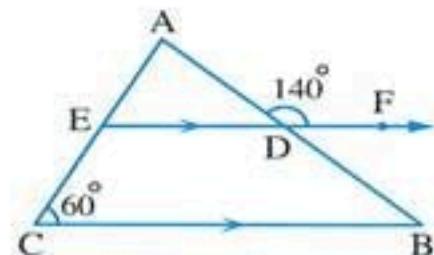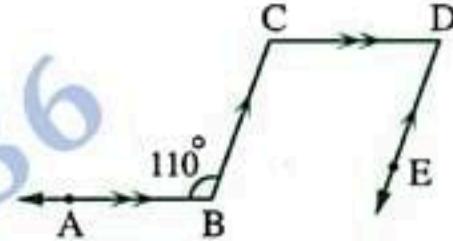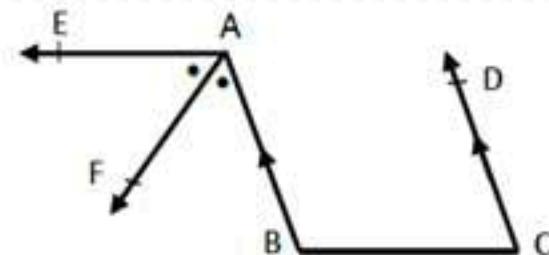
5	If $Y \in \overrightarrow{ZX}$, m ($\angle$ XYM) = 150° and m ($\angle$ Z) = 30° ① **Find :** m ($\angle$ MYZ) ② Is $\overrightarrow{YM}$ // $\overrightarrow{ZL}$? Why ? (Showing the steps)	
	....	
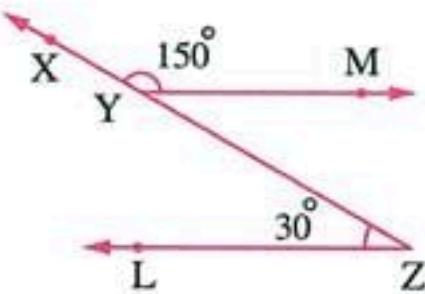
Exam (10)

1	if $\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$, then x = ... (a) 30 (b) 45 (c) 60 (d) 90
2	if $\angle X \equiv \angle Y$ and $\angle X, \angle Y$ are suplementary angles ,then m ($\angle X$) = ... (45 , 90 , 135 , 180)
3	in the opposite figure : x = ... (a) 70 (b) 90 (c) 110 (d) 290
4	the angle whose measure is more than 180 and less than 360 is called .... (obtuse , straight , reflex , acute)
5	m ($\angle C$) = ... (90 , 140 , 40 , 50)
6	the number of rectangles of the opposite figure is .... (3 , 4 , 6 , 5)
7	if $\angle A \equiv \angle B$,then m ($\angle A$) − m ($\angle B$) = ...
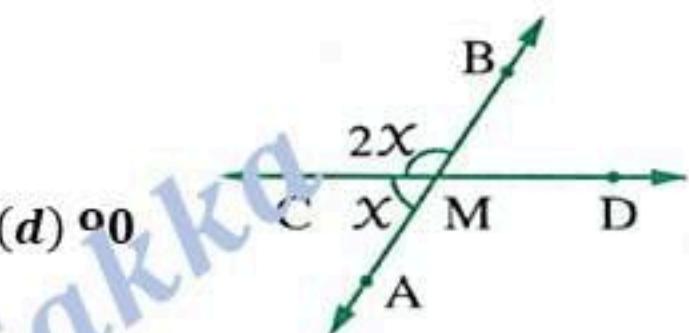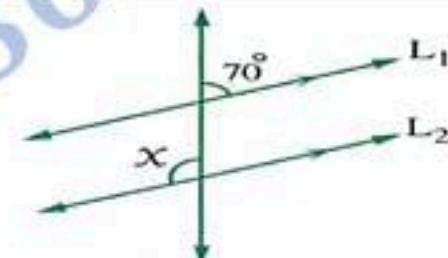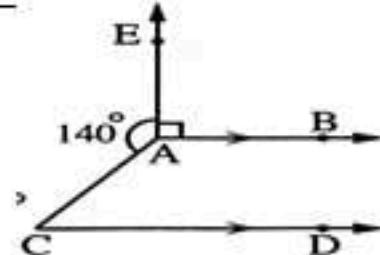
8	*the obtuse angle supplements* .... *angles*
9	*if a straight line cuts two straight lines and two corresponding angles are equal in measure , then the two straight lines are* ....
10	*the value of x =* ....
11	*the two diagonals are equal in length in* .... *and* ....
12	*if ∠ X supplements ∠ Y and m (∠ X) = $\frac{1}{2}$ m (∠ Y),then m (∠ Y) =* ......

Answer the following

1	The figure ABCF ≡ the figure AEDF m (∠ AFC) = 90° , AB = 5 cm. **Complete :** (1) m (∠ BAE) = ...° (2) AE = ... cm. (3) m (∠ EDF) = m (∠ ....)	
2	$\overleftrightarrow{XY}$ // $\overleftrightarrow{DE}$, m (∠ XAE) = 80° , m (∠ B) = 80 , AD = ED , AC = 10 cm. Is $\overleftrightarrow{DE}$ // $\overline{BC}$? Why ? **Find :** The length of $\overline{AE}$, give reason	

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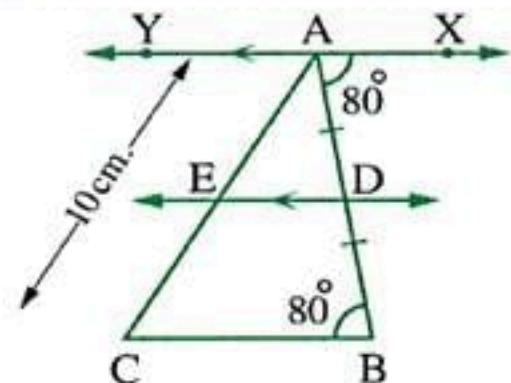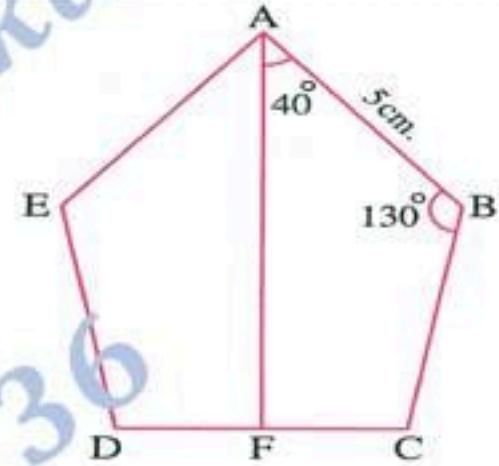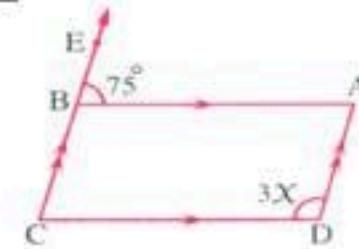
3	$\overrightarrow{AC} \cap \overrightarrow{DE} = \{B\}$, m ($\angle$ ABD) = 50° and m ($\angle$ ABF) = 90° **Find showing the steps :** (1) m ($\angle$ DBC) (2) m ($\angle$ CBE) (3) m ($\angle$ FBE)	
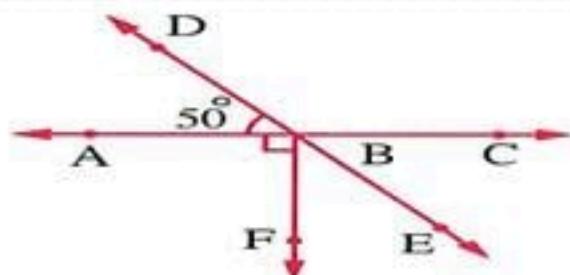
4	$\overrightarrow{AB}$ // $\overrightarrow{DC}$, m ($\angle$ EBC) = 43° , m ($\angle$ D) = 137° Is $\overrightarrow{BC}$ // $\overrightarrow{AD}$? Giving reason.	
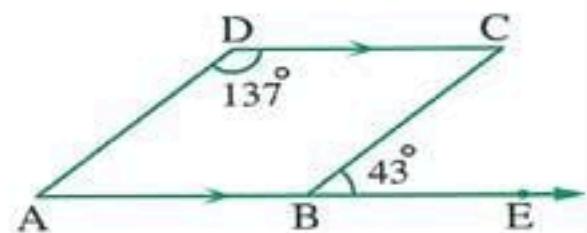
5	$\overrightarrow{AD}$ // $\overrightarrow{CB}$, m ($\angle$ BAD) = 60° , m ($\angle$ C) = 45° **Find :** m ($\angle$ BAC) , m ($\angle$ E)	
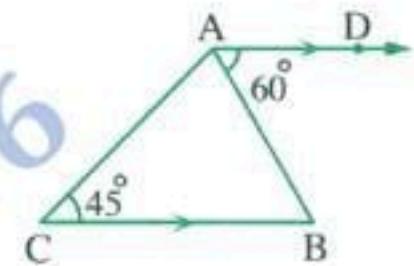
6	$\overrightarrow{AB}$ // $\overrightarrow{CD}$ // $\overrightarrow{EF}$, m ($\angle$ A) = 40° , m ($\angle$ E) = 30° **Find :** m ($\angle$ ACE)	

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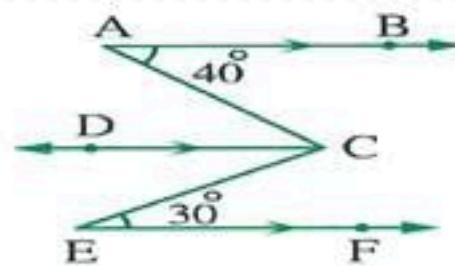
1 **Choose the correct answer:**

1) If m ($\angle$ A) = 60°, then m (reflex $\angle$ A) = ……. .

  a) 30°   b) 60°   c) 120°   d) 300°

2) If $\triangle$ ABC $\equiv$ $\triangle$ XYZ, if $\angle$ m A + m $\angle$ B = 130° then m $\angle$ Z = …….°.

  a) 65   b) 90   c) 50   d) 60

3) If $\angle$A, $\angle$B are supplementary angles if m $\angle$A = 2m $\angle$B, then m $\angle$B = …….°.

  a) 180   b) 120   c) 30   d) 60

4) The sum measures of the accumulative angles at a point is …….°.

  a) 180   b) 120   c) 90   d) 360

5) If m $\angle$ A = 120°, then the reflex of $\angle$ A is …….° .

  a) 200   b) 60   c) 240   d) 90

2 **Complete:**

1) Every two vertically opposite angles are ……. in measure.

2) If two adjacent angles are supplementary, then their outer sides are ……. .

3) If $\angle$ A $\equiv$ $\angle$ B, then m $\angle$ A – m $\angle$ B = is ……. .

4) The sum of the measure of the two complementary angles is ……. °.

5) Every two corresponding angles are ……. .

3 **a)** Using the geometric instruments, draw $\triangle$ ABC where, AB = AC = 5 cm
    BC = 6 cm, then bisect $\angle$ A by the bisector $\overline{AD}$ to meet $\overline{BC}$ at D.

  (don't remove arce).

b) In the opposite figure if $\overrightarrow{CD}$ ∥ $\overrightarrow{BA}$, $\overrightarrow{DE}$ ∥ $\overline{CB}$

  m $\angle$ C = 110°

  Find:

  1. m $\angle$ D

  2. m $\angle$ B
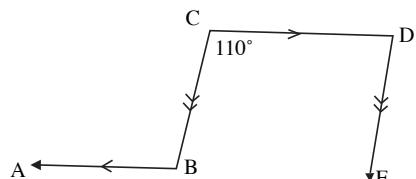
4 **a) In the opposite figure.**

m ∠ AMB = 45°

m ∠ BMC = 120°

m ∠ AMD = 90°

Find m ∠ CMD
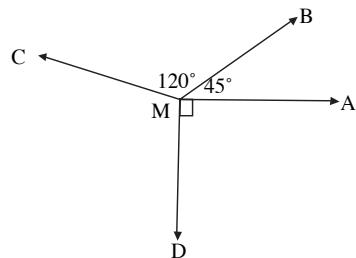
b) In the opposite figure

M ∈ $\overleftrightarrow{AB}$, m ∠ AMC = 70°

$\overrightarrow{MD}$ bisects ∠ CMB

Find m ∠ BMD by proof
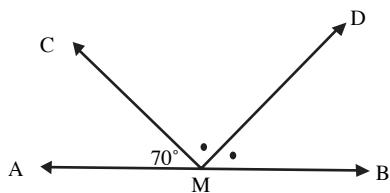
5 **a) In the opposite figure**

AB = CB, AD = CD

m ∠ ABD = 45°, m A = 100°

Find with proof m ∠ CDB
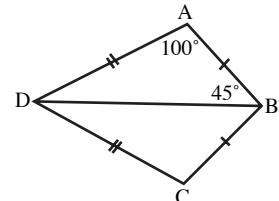
b) In the opposite figure

mension the parallel lines.
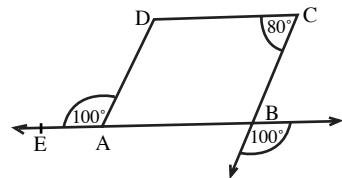
1 **Complete:**

1. The angle of measure 25° supplements the angle of measure .... °.

2. In any right-angled triangle the side which is opposite to the right angle is called ....°.

3. If a straight line intersects two parallel straight lines, then every two alternate angles are ....

4. Two triangles are congruent if the lengths of sides of one triangle ....

5. If △ ABC ≡ XYZ, m (∠ X) + m (∠ Y) = 150°, then m (∠ C) = ... °.

2 **Choose the correct answer from the given ones:**

a) The angle of measure 30° complements of the angle of measure ....

{90° , 180° , 60° , 150°}
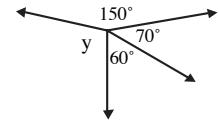
b) In the opposite figure: y = ...

{360° , 60° , 180° , 80°}

c) In the opposite figure:

If $\overleftrightarrow{AB} \cap \overleftrightarrow{DC} = \{M\}$, x = ...

{45° , 15° , 135° , 165°}

d) In the opposite figure, Z =

{40° , 50° , 90° , 60°}
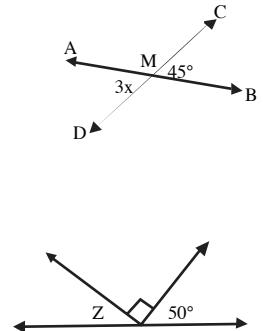
e) The two lines which are parallel to a third are ....

{perpendicular - parallel - equal - intersect}

3 **a) In the opposite figure:**

$\overline{CD}$ // $\overline{BA}$ and $\overline{DE}$ // $\overline{CB}$, m ($\angle$ B) = 130°

Find: m ($\angle$ D) (Giving reasons)
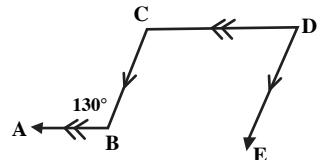
b) In the opposite figure:

$\overline{AB} \cap \overline{CD} = \{X\}$, AC = XB

DX = XC, m ($\angle$ CXB) = 30°

m (CBX) = 110°

1) Find m ($\angle$ D) (Giving reasons)

2) Is $\overline{AD}$ // $\overline{BC}$? Why?
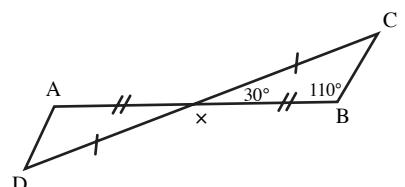
4 **a) In the opposite figure:**

m ($\angle$ ABD) = 90°, $\overline{BA}$ // $\overline{CD}$

Find: m ($\angle$ BDC)
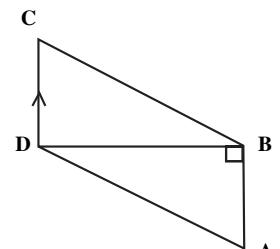
b) In the opposite figure:

m (∠ DBE) = 30° , m (∠ EBA) = 110°

∠ CBD is a right angle, find m (∠ ABC).
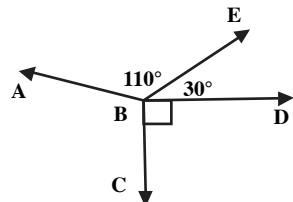
5 a) In the opposite figure:

$\overrightarrow{BD}$ bisects ∠ B

m (∠ A) = 100°, m (∠ BDC) = 130°

Find: m (∠ C) (Giving reasons)
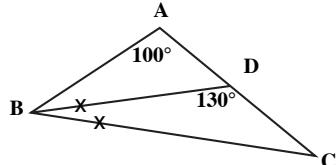
b) Draw △ ABC in which AB = AC = 5 cm and BC = 4 cm. Use the compasses to draw the perpendicular from A to $\overline{CB}$.

---

1 Choose the correct answer:

1) The supplementary of the acute angle is ……. angle.

  a) zero   b) acute   c) right   d) obtuse

2) In the opposite figure:

If $\overleftrightarrow{CD}$ ∩ $\overleftrightarrow{AB}$ = {m}, then x = ……°

a) 70   b) 150

c) 65   d) 330
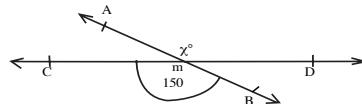
3) In the opposite figure:

then m (∠ D) = ……°

a) 39   b) 65

c) 25   d) 55
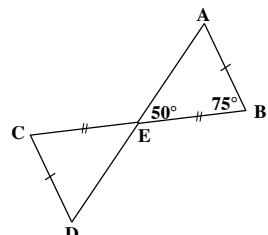
4) In the opposite figure:

If AC = 12 cm, then AH = ……. cm

a) 3   b) 4

c) 8   d) 9
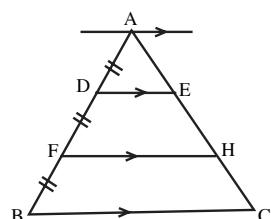
5) The sum of the measures of accumulative angles at a point is ....°

a) 90   b) 360   c) 180   d) 270

❷ Complete:

1) When a transversal cuts two parallel lines, the alternate angles are ……. .

2) If m ($\angle$ X) = 100°, then m (reflex $\angle$ X) = …….° .

3) The two triangles are congruent if two sides and ……. in one of then are congruent to their corresponding elements in the other.

4) If triangle ABC is congruent to the triangle XYZ and m ($\angle$ X) = 60° m ($\angle$ B) = 50°, then m ($\angle$ Z) = …….° .

5) In the opposite figure:

  If $\overline{AB}$ // $\overline{CD}$, then the value of x = …….
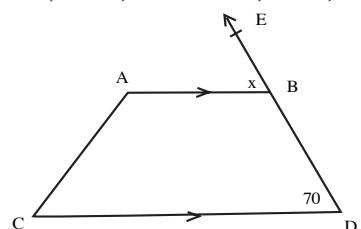
❸ a) Draw $\angle$ABC whose measure is 130 use ruler and compasses to bisect $\angle$ABC.
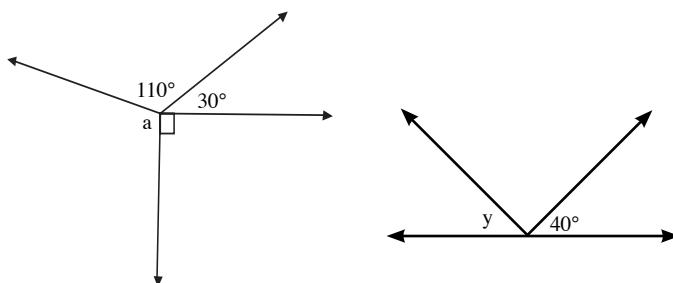
❹ a) In the opposite figure:

AB = CD, m ($\angle$ DBC) = 35°

$\overline{AB} \perp \overline{BC}$ and $\overline{DC} \perp \overline{BC}$

Find: m ($\angle$ BMC)
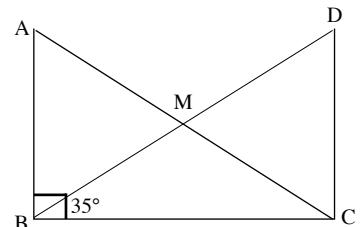
b) In the opposite figure:

DC = DB and AB = AC

Verify that: $\overline{AD}$ bisects ($\angle$ ABC)
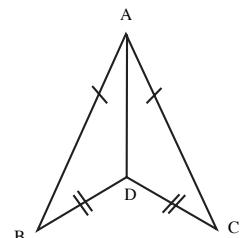
5 a) In the opposite figure:

$\overrightarrow{AB} \parallel \overline{CD}, \overline{DE} \parallel \overline{CB}$

and m ($\angle$ B) = 70°

Find: m ($\angle$ D)
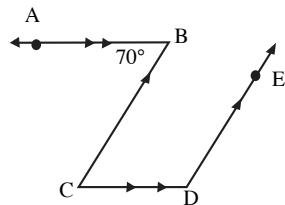
b) In the opposite figure:

Show that: $\overleftrightarrow{L} \parallel \overleftrightarrow{M}$
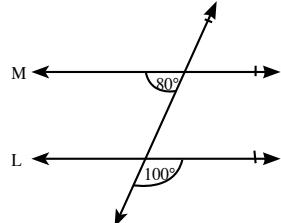
---

1 Choose the correct answer:

1. If m ($\angle$ A) = 70°, then m (reflex $\angle$ A) = ……

a) 110°　　　　b) 70°　　　　c) 210°　　　　d) 290°

2. If m ($\angle$ x) + m ($\angle$ y) = 90°, then $\angle$ x and $\angle$ y and ……

a) supplementary　　　　b) complementary

c) equal　　　　d) acute

3. If △ XYZ ≡ △ LMN, then ....

a) XY = MN　　b) XZ = LN　　c) XY = LN　　d) XZ = LM

4. The sum of the accumulative angles at a point equals ……

a) 90°　　　　b) 360°　　　　c) 270°　　　　d) 180°

5. In the opposite figure: If AE = 8 cm, then AC = …… cm

a) 41　　　　b) 8　　　　c) 12　　　　d) 16
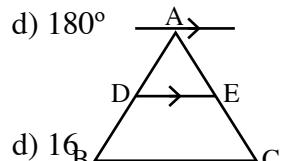
2 Complete:

1. The two vertically opposite angles are .... in measure.

2. Two angles are congruent if ....

3. If two straight lines are parallel to a third straight line, then they are ....

4. Any two triangles are congruent if ....

5. In the opposite figure: X = ... °.

3 **(a)** Draw ∠ XYZ its measure 80º (using the compass and the ruler) bisect ∠ XYZ (don't remove your arcs)

(b) In the opposite figure:

m (∠ ABC) = 90º, m (∠ CBD) = 40º

m (∠ DBE) = 100º. Find m (∠ ABE)
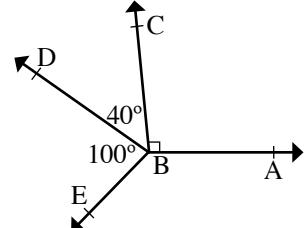
4 **a) In the opposite figure:**

(AD⃗ // BD⃗) m (∠ EAD) = 40º

m (∠ DAC) = 30º

Find: m (∠ C), m (∠ B), = and m (∠ BAC)
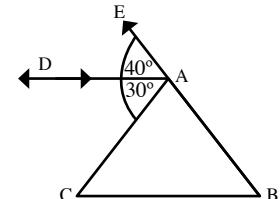
b) In the opposite figure:

AB = BC, DA = DC

m (∠ ABD) = 60º, m (∠ BAD) = 80º

Find: m (∠ ADC)
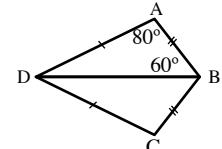
5 **a) In the opposite figure:**

m (∠ B) = 120º, BA⃗ // CD⃗

DE⃗ // BC⃗, find m (∠ D)
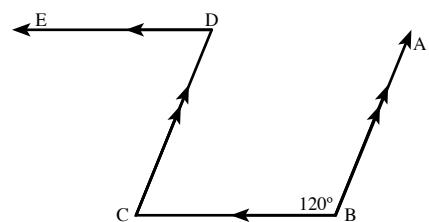
b) In the given figure:

Show that AB⃗ // CD⃗
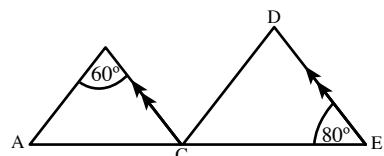
1 **Choose the correct answer:**

1. The sum of measures of the accumulative angles at a point is …….

a) 180º   b) 360º   c) 90º   d) 270º

2. If △ ABC ≡ △ XYZ, then …….

a) AB = YZ   b) AC = ZY   c) AC = XY   d) AC = XZ

3. If m (∠ A) = 170º, then m (reflex ∠ A) ....

a) 90º   b) 190º   c) 100º   d) 80º

4. An angle of measure 60º supplements an angle of measure…….

    a) 60º   b) 90º   c) 120º   d) 30º

5. The angle of measure 72º complements to angle of measure …….

    a) 108º   b) 90º   c) 18º   d) 180º

❷ Complete:

a) In the opposite figure. m ($\angle$ BNC) ....

b) If a straight line intersects two parallel straight line, then each two alternate angles are ....

c) If a straight line intersects another straight line, then each two vertically opposite angles are ....

d) Two triangles are congruent if ....

e) In the opposite figure. C $\in$ $\overleftrightarrow{AB}$, then m ($\angle$ BCE) = ... º.
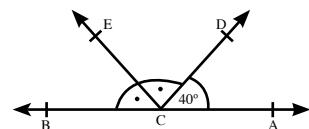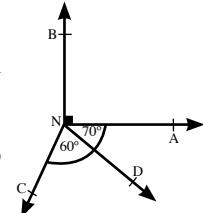
❸ (a) Using the geometric tools, draw an angle of measure 80º, then bisect it (Don't remove the arcs)

(b) In the opposite figure:

$\overrightarrow{YN}$ bisects
$\angle$ MYZ where M $\in$ $\overrightarrow{XY}$
m ($\angle$ MYZ) = 100º

Show that: $\overrightarrow{XZ}$ // $\overrightarrow{YN}$
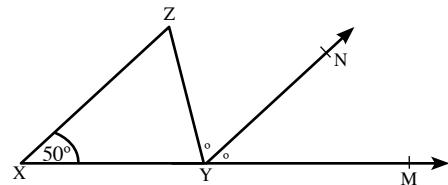
❹ a) In the opposite figure. AB = BC:

AD = DC, m ($\angle$ A) = 100º

1. Given reasons why $\triangle$ ABD $\equiv$ $\triangle$ CBD

2. Find m ($\angle$ C)

b) $\overrightarrow{AB}$ // $\overrightarrow{EF}$ // $\overrightarrow{CD}$, m ($\angle$ C) = 105º

m ($\angle$ A) = 70º find m ($\angle$ AEC)
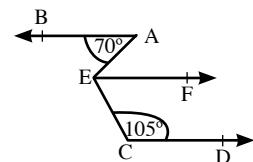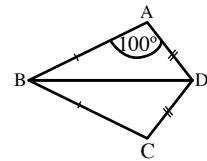
❺ a) In the figure:

$\overleftrightarrow{AC}$ $\cap$ $\overleftrightarrow{DE}$ = { M }

$\overrightarrow{MF}$ bisects $\angle$ DMC,

m ($\angle$ DMA) = 50º

Find m ($\angle$ FMC), m ($\angle$ CMC)

https://www.facebook.com/aladwaa شارك بتعليقاتك على
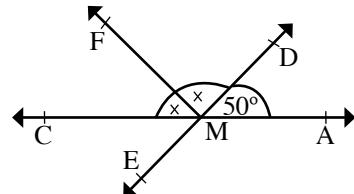
b) In the opposite figure.

$\overrightarrow{CD}$ // $\overrightarrow{AB}$

m ($\angle$ A) = 70º

m ($\angle$ LCD) = 2X

Find the value of X
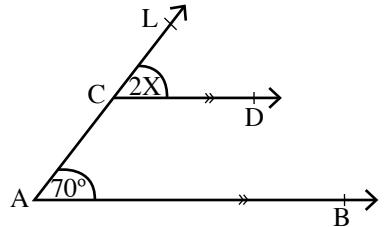
1 **Choose the correct answer:**

1. If m ($\angle$ X) = 100º, then m (reflex $\angle$ X) = ……
    a) 80º   b) 100º   c) 360º   d) 260º

2. If $\triangle$ ABC ≡ $\triangle$ XYZ, then m ($\angle$ A) = ……
    a) m ($\angle$ C)   b) m ($\angle$ X)   c) m ($\angle$ Y)   d) m ($\angle$ Z)

3. The angle of measure 70º complements the angle of measure ....
    a) 20º   b) 110º   c) 90º   d) zero

4. **In the opposite figure:**
    If EG = 9 cm, then GH = ... cm
    a) 3   b) 6
    c) 9   d) 18
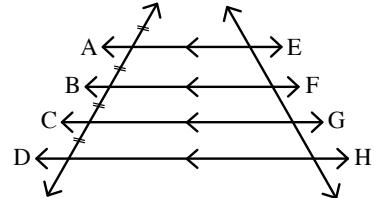
5. **In the opposite figure:**
    m ($\angle$ Y) = ...
    a) 120º   b) 30º
    c) 60º   d) 180º
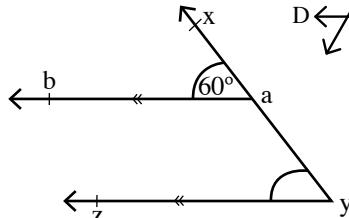
2 **Complete each of following:**

a) If two straight line intersect, then each two vertically opposite angles are ....

b) The supplement of angle whose measure 50º = ...

c) If $\overline{AB}$ = $\overline{XY}$, AB = 5 cm then XY = ... cm·

d) If $\overrightarrow{YX}$ bisects ($\angle$ AXM), m ($\angle$ AXY) = 40º then m ($\angle$ YXM) = ...

e) The sum of measure of the accumulative angles at point = ... º.

3 **(a)** Draw an angle whose vertex is A and its measure 120º use ruler and compasses
   to divide the angle into two equal angles (Don't remove the arcs)

(b) In the opposite figure:

m = ($\angle$ XAY) = 90º, m ($\angle$ XAZ) = 130º

Find: m = ($\angle$ ZAY)
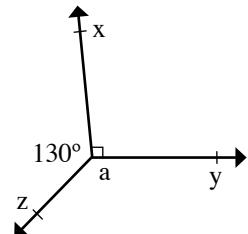
4 a) In the opposite figure:

AC = AB, DC = DB

Prove that $\triangle$ ACD = $\triangle$ ABD
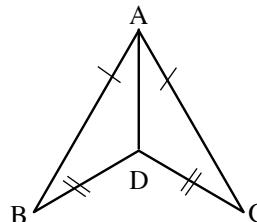
b) In the opposite figure:

$\overrightarrow{AB}$ // $\overrightarrow{CD}$, $\overrightarrow{AC}$ // $\overrightarrow{DE}$ and m ($\angle$ A) = 65°

Find: m = ($\angle$ C) and m ($\angle$ D)
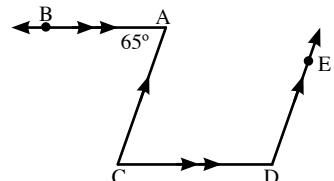
5 (a) The sum of areas of the squares on the sides of a right-angled triangle is........... (complete)

b) In the opposite figure:

Show that: $\overleftrightarrow{AB}$ // $\overleftrightarrow{CD}$

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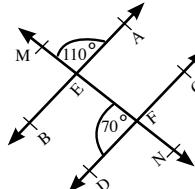
1 Complete each of the following:

1. The angle that its measure $82°$ complements the angle that its measure is …….

2. The two vertically opposite angles are ……. in measure.

3. If m ($\angle$ D) = $120°$, then m (reflex $\angle$ D) = …….

4. In the figure opposite:

   m ($\angle$ D) = …….
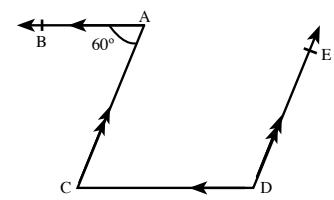
5. In the opposite figure:

   m ($\angle$ MYL) = …….º
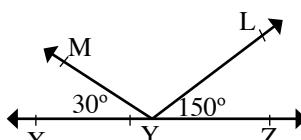
2 Choose the correct answer:

a) The supplements of the angle whose measure 117º is …….

　　a) 36º 　　　　　b) 63º 　　　　　　　c) 90º 　　　　　　　d) 243º

b) The sum of the measures of accumulative angles at a point is …….

    a) 180º   b) 90º   c) 360º   d) 270º

c) In the opposite figure:

    If $\overrightarrow{AB}$ // $\overrightarrow{CD}$, then the value of (x) equal …….

    a) 80º   b) 60º   c) 40º   d) 20º
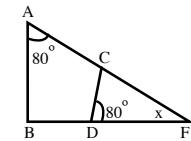
d) If: L_1, L_2 and L_3 are three coplanar straight lines and L_1 // L_2, $L_1 \perp L_3$, then …….

    a) L_1 // L_3 b) $L_2 \perp L_3$ c) $L_1 \perp L_2$ d) L_1 // L_2 // L_3

e) Measure of a straight angle = …….

    a) 90º   b) 180º   c) 270º   d) 360º

❸ **(a)** Draw an angle with measure 130, then bisect it using geometrical tools. (Don't remove the arcs)

  (b) In the opposite figure:

    $\overrightarrow{BA} \perp \overrightarrow{BC}$, m ($\angle$ ABE) = 30 $^\circ$

    and m ($\angle$ EBD) = 110°, find m ($\angle$ CBD)
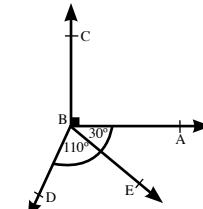
❹ **(a) In the opposite figure:**

    Show that: $\overleftrightarrow{DC}$ // $\overleftrightarrow{AB}$
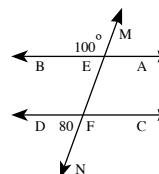
  (b) In the opposite figure:

    $\overleftrightarrow{AF}$ // $\overleftrightarrow{DX}$ // $\overleftrightarrow{EY}$ // $\overrightarrow{BC}$, AX = XY = YC

    If AB = 15 cm, find: the length of $\overline{BE}$
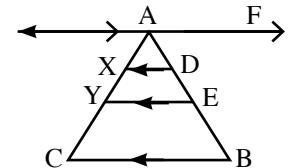
❺ **(a) State two cases of congruency of two triangles.**

  (b) In the opposite figure:

    m ($\angle$ B) = m ($\angle$ D) = 90, m ($\angle$ BAC) = 35 $^\circ$

    and $\overline{BC}$ = $\overline{DC}$, find: m ($\angle$ DAC), m ($\angle$ BCD) (Give reasons)
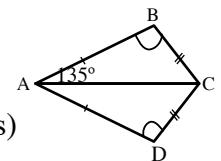
Giza	8	El Dokki Directorate - Gamal Abd El Nasser E.L.S

❶ **Choose the correct answer:**

1) The sum of the measure of accumulative angles at a point is …….

    a) 306°   b) 180°   c) 90°   d) 360°

2) The $\triangle$ ABC $\equiv$ $\triangle$ XYZ, m ($\angle$ X) = 70º, then , m ($\angle$ A) = …….

    a) 110°   b) 70°   c) 20°   d) 180°

3) If m ($\angle$ A) = 120º, then m (reflex $\angle$ A) = …….

   a) 60º   b) 70º   c) 240º   d) 120º

4) In the given figure

    If BH= 6 cm,

    Then BD = ……. cm

   a) 3   b) 6

   c) 9   d) 15
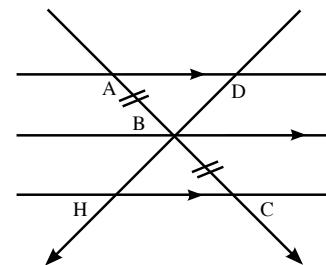
5) The supplement of an acute angle is ……. angle.

   a) right   b) obtuse   c) acute   d) straight

❷ Complete each of the following:

1) In the opposite figure: $\overrightarrow{AB}$ // $\overline{CD}$, $\overline{AC}$ // $\overrightarrow{DE}$.

  m ($\angle$ D)= …….
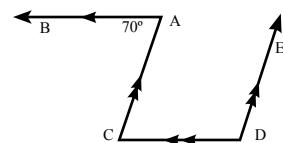
2) If a straight line intersects two parallel straight lines, then any two alternate angles are ……. .

3) Two triangle are congruent if two sides and ……. in one of them is congruent with the corresponding parts of the other.

4) If two straight lines intersect, then the measure of two vertically opposite angles are ……. in measure.

5) In the opposite figure: m ($\angle$ C) = 80º

  $\overrightarrow{AB}$ // $\overrightarrow{CD}$, then X = …….
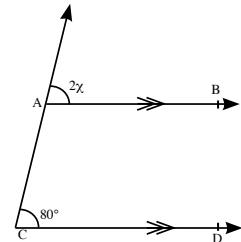
❸ a) Using your geometrical tools to draw $\angle$ ABC of measure 70°, then bisect it.

(Don't remove the arce)

b) In the opposite figure:

  $\overrightarrow{XY} \perp \overrightarrow{XZ}$

  and $\overrightarrow{XL}$ is a bisector of $\angle$ ZXM

  m ($\angle$ YXM) = 120º

  Find: m ($\angle$ LXM)
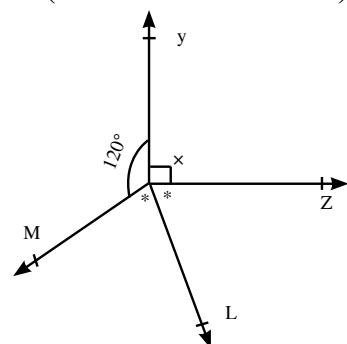
4 **a) In the opposite figure:**

XY = YZ, XL = ZL

m ($\angle$ LXY) = 100°, m ($\angle$ ZLY) = 30º

Find: m ($\angle$ XYZ)
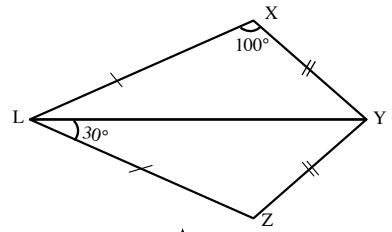
b) In the opposite figure:

$\overrightarrow{AB}$ // $\overrightarrow{CD}$, m ($\angle$ EAC) = 140º
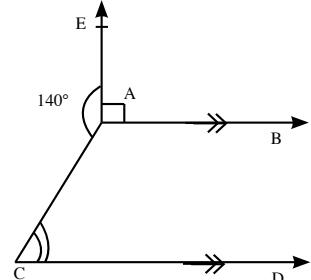
Then find m ($\angle$ C)

5 **a) In the opposite figure:**
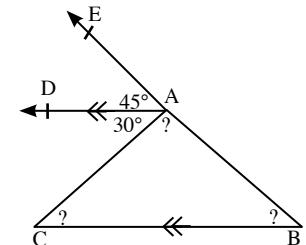
$\overrightarrow{AD}$ // $\overline{BC}$

m ($\angle$ EAD) = 45º

and m ($\angle$ DAC) = 45º

find: m ($\angle$ C), m ($\angle$ B) and m ($\angle$ BAC)

b) In the opposite figure:

$\overleftrightarrow{AB}$ ∩ $\overrightarrow{CD}$ = {C}

$\overrightarrow{CE}$ bisects $\angle$ BCD if m ($\angle$ ACD) = 40º

Find: m ($\angle$ BCE)

Giza	**9**	Omrania Directorate - El Sadat Lang. School
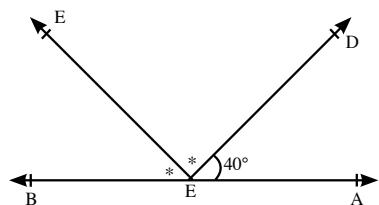
1 **Choose the correct answer:**

1) The angle of measure 60º complement an angle of measure ....
 a) 50º   b) 30º   c) 120º   d) 300º

2) if: $\triangle$ ABC ≡ $\triangle$ XYZ, then $\overline{AB}$ ≡ ……
 a) $\overline{BC}$ b) $\overline{YZ}$ c) $\overline{XZ}$ d) $\overline{XY}$

3) The sum of measures of the accumulative angles at a point ....
 a) 360º   b) 180º   c) 90º   d) 270º

4) In the opposite figure:

$\overrightarrow{AB}$ // $\overrightarrow{CD}$, the value of X = …….

 a) 40º   b) 140º

 c) 70º   d) 35º
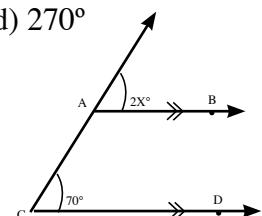
5) If: m ($\angle$ A) = 100, then m (reflex $\angle$ A) = …….

   a) 80º   b) 100º   c) 260º   d) 170º

2 Complete each of the following:

1) If a straight line intersects two parallel lines, then each two alternate angles are ……. .

2) The two vertically opposite angles are ……. in measure.

3) The two triangles are congruent if …….

4) If two adjacent angles are supplementary. Then their outer sides are ……. .

5) In the opposite figure:

$\overleftrightarrow{AX}$ // $\overleftrightarrow{BY}$ // $\overleftrightarrow{CZ}$, AB = 3 cm.

and XY = YZ, then AC = ……. cm
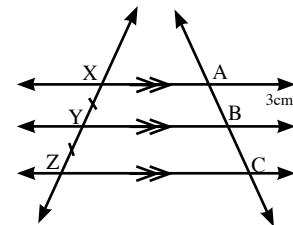
3 a) Using the geometric instrument draw an angle of measure 120º, then bisect it.

(Don't remove arcs)

b) In the opposite figure:

$\overleftrightarrow{AB}$ ∩ $\overleftrightarrow{DE}$ = {M}, $\overrightarrow{MC}$ bisects $\angle$ DMA

m ($\angle$ BMD) = 40º

Find: m ($\angle$ EMA), m ($\angle$ DMC)
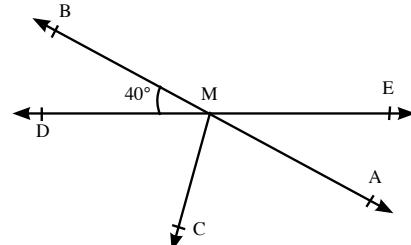
4 a) In the opposite figure:

$\overrightarrow{AD}$ // $\overline{BC}$, m ($\angle$ EAD) = 40˚

m ($\angle$ DAC) = 30º

Find: m ($\angle$ C), m ($\angle$ B) and m ($\angle$ BAC)
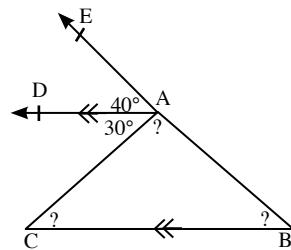
b) In the opposite figure:

m ($\angle$ BAH) = 90º , m ($\angle$ BAC) = 40º

m ($\angle$ CAD) = 110º

Find: m ($\angle$ DAH)
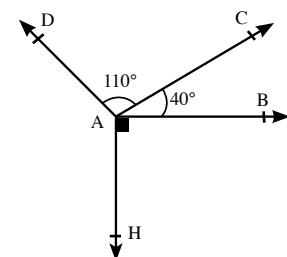
5 **a) In the opposite figure:**

$\overline{BC} \equiv \overline{DC}$

m ($\angle$ B) = m ($\angle$ D) = 90º

AD = 7 cm, and m ($\angle$ BCA) = 50
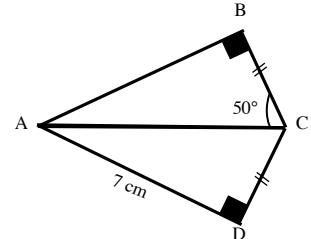
Complete:

(1) $\triangle$ ABC $\equiv$ $\triangle$ …….   (2) AB = ……. cm

(3) m ($\angle$ BAD) = ……. º

b) In the opposite figure:

m ($\angle$ 1) = m ($\angle$ 4), $\overleftrightarrow{BC}$ // $\overleftrightarrow{ED}$, show that $\overrightarrow{BA}$ // $\overrightarrow{DF}$
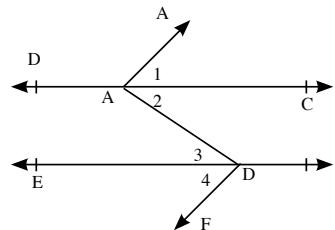
1 **Complete:**

1) If two straight lines are parallel to a third straight line, then they are …….

2) If $\angle$ A complements $\angle$ B and m ($\angle$ A) = 2m ($\angle$ B), then m ($\angle$ A) = ……. º

3) The two vertically opposite angles are ……. .

4) If m ($\angle$ ABC) = 85º , then m (reflex $\angle$ ABC) = ……. .

5) Tw angles are congruent if they are ……. .

2 **Choose the correct answer:**

1) If $\triangle$ABC $\equiv$ $\triangle$XYZ, then $\overline{BC}$ $\equiv$ …….

  a) $\overline{XY}$ b) $\overline{YZ}$ c) $\overline{XZ}$ d) $\overline{AB}$

2) The angle of measure 50º complements the angle of measure …….

  a) 140º   b) 130º   c) 50º   d) 40º

3) The acute angle supplements ……. angle.

  a) acute   b) right   c) obtuse   d) straight

4) The value of X = ……. º

  a) 40º   b) 60º   c) 80º   d) 100º

5) The sum of the acummulative angles at a point is ....

  a) 306º   b) 180º   c) 90º   d) 360º

3 **a)** Draw an angle XYZ of measure 110°, then draw $\overrightarrow{YL}$ bisect it by using the compasses.
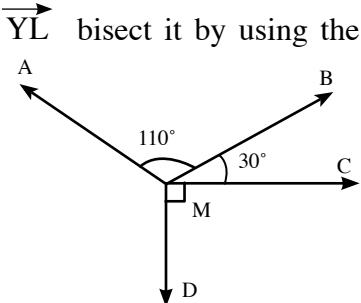
b) In the opposite figure:

find m ($\angle$ AMD)

4 **a)** If a straightk line intersects two parallel straight lines, then every two interior angle on one side of transversal are ....

b) In the opposite figure:

XZ = XL, YZ = YL

m ($\angle$ Z) = 45°

and m ($\angle$ YXL) = 25°

Prove that $\triangle$XYZ $\equiv$ $\triangle$ XYL

Find m (reflex $\angle$ZYL)
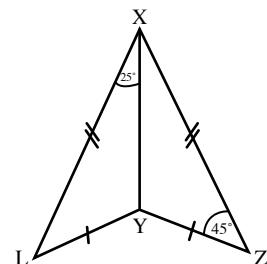
5 **a) In the opposite figure:**

$\overline{AC}$ // $\overline{DB}$, $\overline{CB}$ // $\overline{FD}$ and $\overline{CE}$ bisects $\angle$ ACB

m ($\angle$ ACE) = 55°

Find m ($\angle$ CBD), m ($\angle$ D)
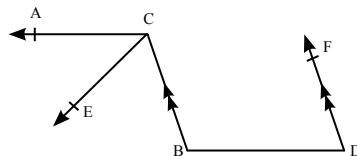
b) In the opposite figure:

If DH = 12 cm, then

DE = ... cm

Alexandria **11** Mid. Educational Zone - El Orwa Exp. School For Boys

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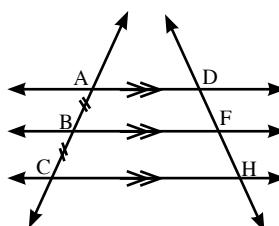
1 **Complete the following:**

a) If a straight line intersects two parallel straight lines, then every two alternate angles are ......

b) In the opposite figure, x = ... °

c) In the opposite figure, x = ...°
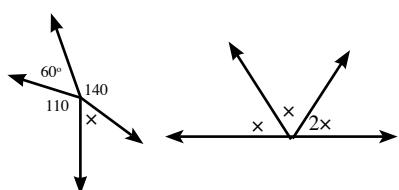
d) The straight line which is perpendicular to one of two parallel straight lines is .... the other.

e) Two triangles are congruent if ....

❷ Choose the correct answer:

a) Two adjacent angles formed by a straight line and a ray are.............

[equal , supplementary , complementary , congruent]

b) The sum of measure of accumulative angles at one point = ...

[90° , 180° , 270 , two straight angles]

c) If $\triangle$ ABC $\equiv$ $\triangle$ XYZ, then AC = ... [XY , YZ , XZ , BC]

d) If $\angle$ A complement $\angle$ B, m ($\angle$ A) = m ($\angle$ B), then m ($\angle$ A)

[90° , 180° , 45° , 60°]

e) In the opposite figure $\overrightarrow{AB}$ // $\overleftrightarrow{AB}$, m ($\angle$ FCD) =140, then m ($\angle$ A) = ... [80° , 40° , 20° , 100°]
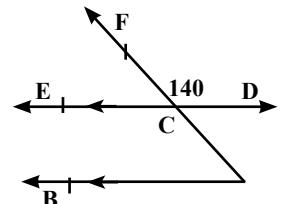
❸ a) In the figure opposite, $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ are bisecting at M, $\overrightarrow{ME}$ bisects $\angle$ AMC, M ($\angle$ BMC) = 114° . Find m ($\angle$ AMC), ($\angle$ AMD), and ($\angle$ AME)
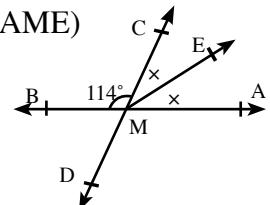
b) Use the ruler and the compasses to draw the equilateral $\triangle$ ABC of side 6 cm, draw $\overline{AD} \perp \overleftrightarrow{BC}$ where $\overrightarrow{AD} \perp \overline{BC}$ = {D}. What the length of $\overline{AD}$. (Don't remove the arcs)

❹ a) In the opposite figure AB = BC, AD = CD , m ($\angle$ BAD) = 105º

m ($\angle$ BDC) = 25º. Find m ($\angle$ ABD).
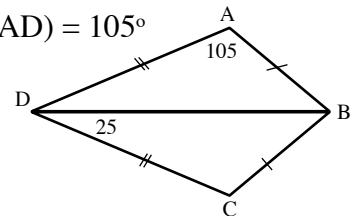
b) In the opposite figure $\overleftrightarrow{AF}$ // $\overleftrightarrow{DX}$ // $\overleftrightarrow{EY}$ // $\overleftrightarrow{BC}$

AX = XY = YC

If AB = 15 cm

Find the length of $\overline{BE}, \overline{BD}$.
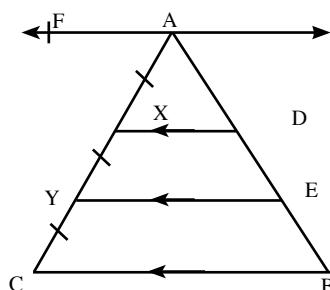
5 a) In the opposite figure $\overrightarrow{AD}$ // $\overline{BC}$, m ($\angle$ DAC) = 35°

m ($\angle$ EAD) = 60°. Find measure of the interior
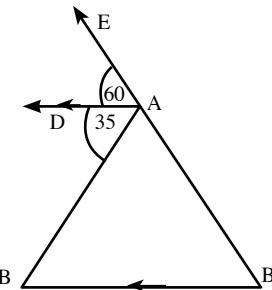
angles of Δ ABC

b) In the opposite figure show that $\overleftrightarrow{AB}$ // $\overleftrightarrow{CD}$
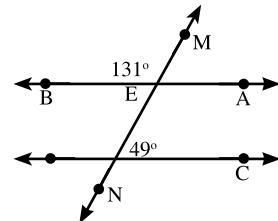
1 **Complete:**

a) If m ($\angle$ X) = 120° then m (reflex $\angle$ X)   = ...° .

b) the straight angle supplements .... angle.

c) In this figure:

these triangles are congruent.
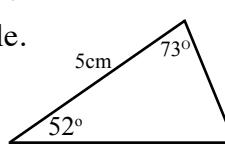
then x = ...° .
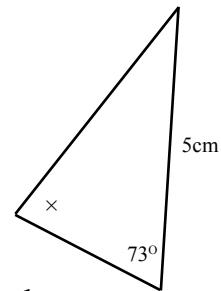
d) Two triangles are congruent if two sides and .... angle of triangle are congruent
   to the corresponding parts of the other triangle.

e) If a straight line intersects two parallel straight lines, then each two corresponding
   angles are ....

2 **Choose the correct answer:**

a) The complement of angle whose measure 50° is ....°

{50 or 130 or 40 or 310}

b) If the two straight lines are parallel to a third straight, then they are ....

{perpendicular or parallel or congruent or on the same straight line}

c) The axis of symmetry of a line segment is ....

{perpendicular it or bisecting it or parallel it or perpendicular and bisecting it}

d) The two bisectors of two adjacent supplementary angles ....

{are parallel or are perpendicular or are congruent or included an acute angle between them}

e) If two straight lines intersected, the every two vertically opposite angles are ......

{complementary or supplementary or equal in measure or alternate}

❸ a) Using the geometric tools to draw ∠ ABC an straight angle

The $\overrightarrow{BX}$ bisects it. Find the measure of (∠ XBA)   (Don't remove arcs)

b) In the opposite figure $\overline{AB} \cap \overline{DE}$ = { C }

EC = DC , m (∠ E) = m (∠ D) Prove that:

1. Δ AEC = DBC

2. Write one state of the cases of congruence.
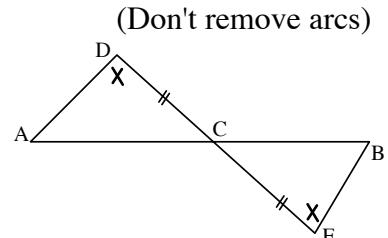
❹ a) In the opposite figure $\overleftrightarrow{XY}$ // $\overleftrightarrow{ZL}$ // $\overleftrightarrow{MN}$

m (∠ YAB) = 30°, m (∠ NCB) = 50°

Find m (∠ ABC)
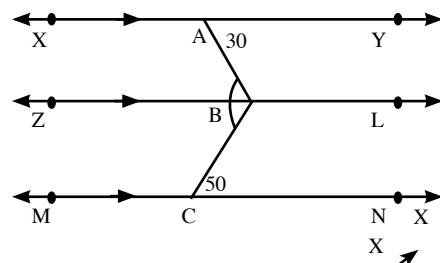
b) In the opposite figure $\overleftrightarrow{XY}$, $\overrightarrow{MA}$ bisect ∠ YMX

m (∠ XMB) = 140° Find m (∠ XMY)
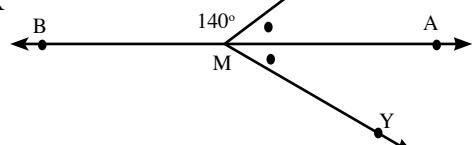
❺ a) In the opposite figure:

If DC = 16 cm,

then find the length of DI.
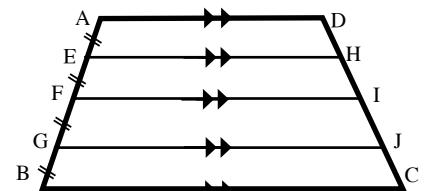
b) In the opposite figure

∠ ABC which m ∠ A) = 80°

$\overrightarrow{BD}$ bisects ∠ B, $\overrightarrow{CD}$ bisects ∠ C

Find m (∠ BDC)
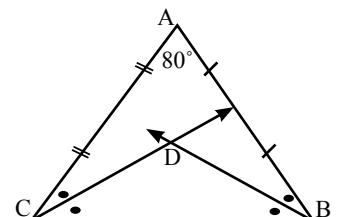
❶ Complete:

a) The sum of the accumulative angles at a point equals ....

b) If m ($\angle$ A) = 110°, then m (reflex $\angle$ A) = ...

c) The angle of measure 40° complements angle of measure ....

d) The two vertically opposite angles are .... in measure.

e) The supplement of an acute angles is .... angle.

❷ Choose the correct answer:

a) The supplementary of the angle that its measure equals 70° is ....

  1. 110°   2. 120°   3. 90°   4. 20°

b) The straight angle its measure is ....

  1. 90°   2. 180°   3. 45°   4. 360°

c) In this figure:

  ABC is a triangle, D $\in \overline{AC}$ and

  $\overrightarrow{BD}$ is a bisector of $\angle$ B,

  What is the measure of $\angle$ C?
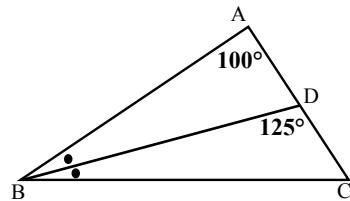
  1. 25°   2. 30°   3. 45°   4. 55°

d) The type of the triangle of its measure 90° is ....

  1. right   2. acute   3. obtuse   4. straight

e) 3X° and 75° are supplementary angles, then X = ...

  1. 25°   2. 35°   3. 45°   4. 105°

❸ a) Draw $\angle$ ABC its measure 120° (using the compass and the ruler) bisect < ABC. (Don't remove the arcs)

b) In the opposite figure:

  m ($\angle$ AMB) = 50° , m ($\angle$ AMD) = 90°

  and m ($\angle$ BMC) = 110°. Find the m ($\angle$ CMD)
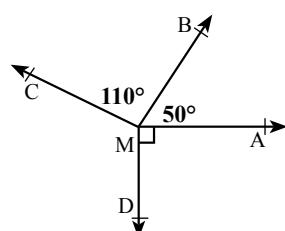
4 **a) In the opposite figure:**

If DE = 5 cm, then

Find the length of $\overline{AB}$.
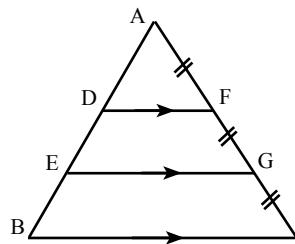
**b) In the opposite figure:**

$\overrightarrow{BA} \parallel \overrightarrow{CD}, \overrightarrow{CB} \parallel \overrightarrow{DE}$

M ($\angle$ B) = 70°

Find m ($\angle$ C) and m ($\angle$ D)
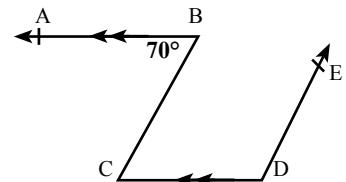
5 **a) In the opposite figure:**

m ($\angle$ Y X L) = 30° , m ($\angle$ Y Z X) = 40°

Complete:

1. m ($\angle$ Y X Z) = ...°.

2. m ($\angle$ L) = ...° , m reflex ($\angle$ Z Y L) = ... °.
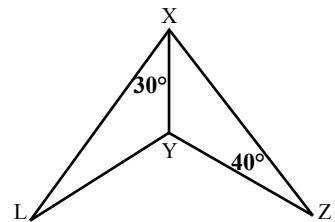
b) In the opposite figure:

$\overrightarrow{AB}$ $\overrightarrow{CD}$ = { C }

$\overrightarrow{CE}$ bisects ($\angle$ B C D) if m ($\angle$ A C D) = 80°

Find: m ($\angle$ B C E)

| Dakahlia | **14** | **Fakher Language Schools** |
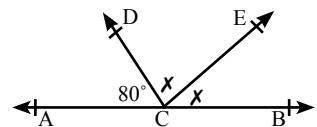
1 **Complete:**

a) If the sum measures of two adjacent angles are 180°, then their outer sides are ....

b) If two St. lines intersect, then .... are equal in measure.

c) If m ($\angle$ A) = 150°, then m (reflex $\angle$ A) = ... °

d) If △ ABC, △ XYZ are congruent, then $\angle$ Z ≡ ....

e) When a transversal cuts two parallel lines, then the interior angles on the same side of the transversal are ....

❷ Choose the correct answer:

1. Which of the following two angles are complementary?

    a) 22°, 68°   b) 55°, 45°   c) 60°, 60°   d) 100°, 80°

2. If Δ ABC $\equiv$ XYZ, and m ($\angle$ A) = 100°, m ($\angle$ Y) = 40°, then m ($\angle$ C) = ...

    a) 70   b) 40   c) 90   d) 60

3. In the given figure m ($\angle$ A) = ...

    a) 30   b) 40

    c) 70   d) 100°

4. Using the figure: X = ...°

    a) 40   b) 60

    c) 30   d) 45

5) If L_1 // L_2, then, Y = ...°

    a) 30   b) 60

    c) 120   d) 50
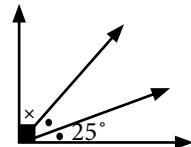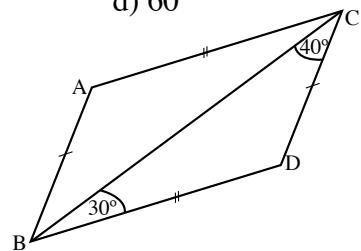
❸ A) In the opposite figure, m ($\angle$ A) = 100°,

    m (< ABD) = 145°. Find m ($\angle$ ACE)
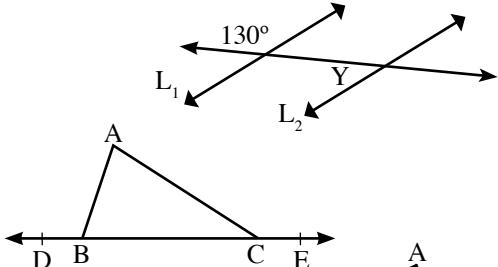
B) If AQ = QX = XY = YB, DE = 2 cm

Find: BC
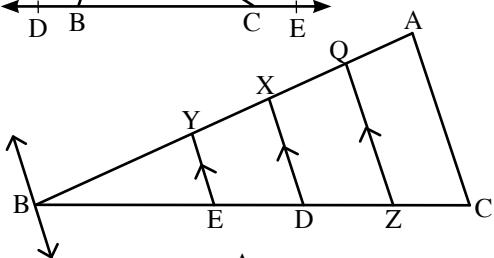
❹ A) If m ($\angle$ A) = 80°, m ($\angle$ ACD) = 70°.

Find the value of $\angle$ B
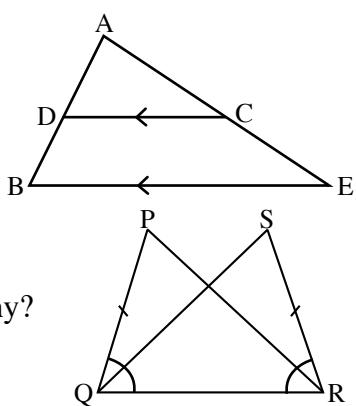
B) Are the two triangles PQR, and SRQ congruent? Why?

5 Using the figure $\overline{CE}$ bisects $\angle$ C, $\overline{BD}$ bisects

$\angle$ B, m ($\angle$ DFE)
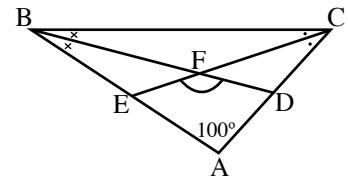
| Behera | **15** | Rasheed Education Zone – Rosetta Language School |

1 **Complete:**

a) The type of the angle of measure 89° 60 is ....

b) If m ($\angle$ A) = 70°, then m (reflex $\angle$ A) = ... °.

c) If $\triangle$ XYZ $\equiv$ $\triangle$ LMN, then $\overline{YZ}$ $\equiv$ ....

d) The straight line that is perpendicular to one of two parallel lines is also ....

e) The two triangles are congruent if two sides and .... in one of them are congruent to their corresponding from the other.

2 **Choose the correct answer:**

a) In the opposite figure:

$\overrightarrow{AB}$ $\overrightarrow{DC}$ = {M}, m (< DMB) = 150°,

then m ($\angle$ AMC) = ...

(30°, 150°, 90°, 180°)
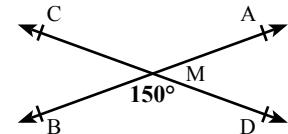
b) The acute angle supplements .... angle

(acute, obtuse, right, straight)

c) In the opposite figure:

$\overrightarrow{AB}$ // $\overrightarrow{CD}$, then x = ...

(40° , 80°, 120° , 20°)

d) The supplement of the angle of measure 70° is ....

(20° , 110° , 40°, 270°)

e) Calculate m ($\angle$ RST)

(Hint: Draw a line passing through S parallel to $\overrightarrow{RX}$ and $\overrightarrow{TY}$)
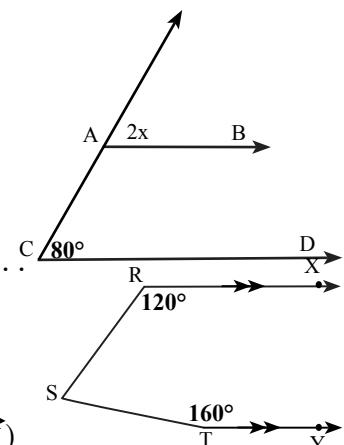
3 **a) In the opposite figure:**

$\overleftrightarrow{AB}$ $\overrightarrow{DC}$ = {M}

$\overrightarrow{ME}$ bisects $\angle$ DMB

and m ($\angle$ AMD)= 40°

Find: (1) m ($\angle$ AMC)   (2) m ($\angle$ EMB)
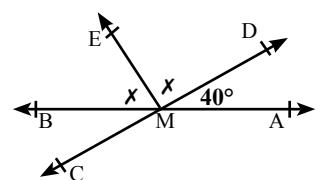
b) Draw $\angle$ XYZ of measure 125°, then use the ruler and the compass to bisect it by $\overrightarrow{YL}$ (Don't remove the arcs)

4 a) In the opposite figure:

If Δ ABC $\equiv$ Δ ABD,

m ($\angle$ BAC) = 45°, m ($\angle$ C) = 30°

BC = 7 cm, then find

1. the length of $\overline{BD}$

2. m ($\angle$ ABC)

3. m ($\angle$ ABD)

4. m ($\angle$ ADB)
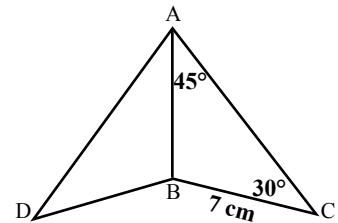
5 a) In the opposite figure:

$\overrightarrow{AB}$ // CD, AE bisects < BAC

m ($\angle$ C) = 60°

find m ($\angle$ BAE)
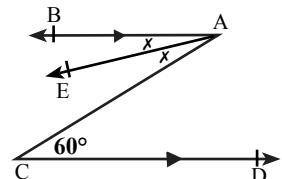
b) In the opposite figure:

$\overleftrightarrow{AF}$ // $\overleftrightarrow{DX}$ // $\overleftrightarrow{EY}$ // $\overleftrightarrow{BC}$

AX = YX = YC

If AB = 12 cm

Find the length of $\overline{BE}$
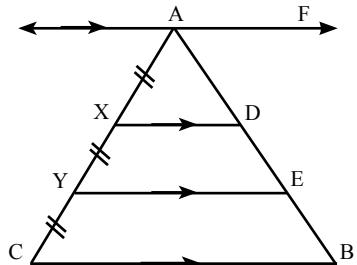
1 Choose the correct answer:

1. The value of x° in the figure opposite is ....

a) 1. 55°   b) 2. 35°   c) 145°   d) 180°
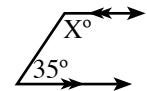
2. In the figure opposite m ($\angle$ DAE) = ...

a) 90°   b) 100°   c) 120°   d) 60
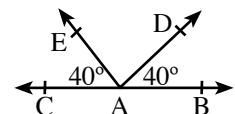
3. Two angles are said be complementary if their sum is ....

    a) 90°   b) 180°   c) 360°   d) 120°

4. In this triangle the hypotenuse is ....

    a) $\overline{AB}$ b) $\overline{BC}$ c) $\overline{CA}$ d) $\angle$ ABC
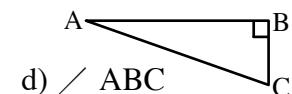
e) If m ($\angle$ A) = 60°, then m (reflex $\angle$ A)= ....

    a) 180°   b) 120°   c) 30°   d) 300°

❷ a) Complete:

    a) A straight line that is parallel to one of two parallel lines is .... to the other.

    b) If two straight lines intersect, then the measures of each two vertically opposite angles are ....

b) The two pentagons shown are congruent.

    Complete: a) B corresponds to ....

          b) KB = ... cm.

          c) m ($\angle$ E) = m ($\angle$ ....).
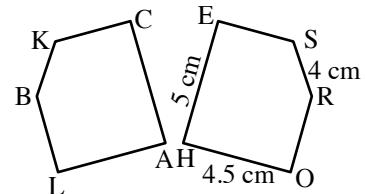
❸ a) In the figure opposite, if B $\in$ $\overleftrightarrow{AC}$,

    m ($\angle$ DBC) = 116° and BA bisects ($\angle$ DBE)

    Find m ($\angle$ ABD), m ($\angle$ DBE), m ($\angle$ CBE)
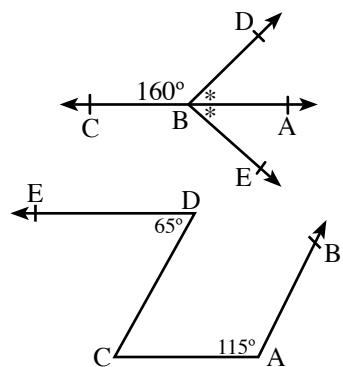
b) In the figure opposite, if $\overrightarrow{AB}$ // $\overline{CD}$,

    Does $\overline{AC}$ // $\overline{DE}$? Why?

❹ a) In the figure opposite AB = AC, BD = CD

    Dose $\triangle$ ADC $\equiv$ $\triangle$ ADB? Why?
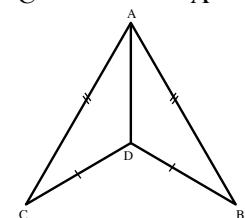
b) In the figure opposite $\triangle$ ABC $\equiv$ $\triangle$ ACD, m ($\angle$ BDC)= 100°

    Study the case of congruency, then deduce:

    a) m ($\angle$ BDA)   b) length $\overline{CD}$
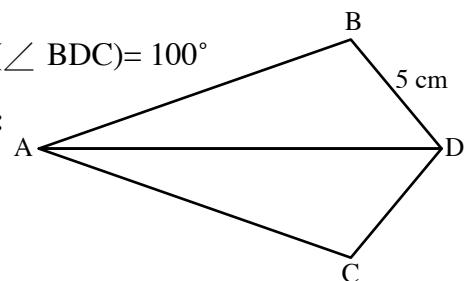
5 **a)** Draw ∠ ABC whose measure is 90°, use the ruler and compasses to bisect ∠ ABC

b) In the given figure calculate

m (∠ RST)
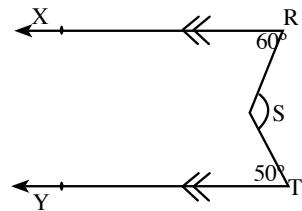
1   **Complete the following to be correct:**

a) Two angles are said be complementary if their sum is ....

b) If: m (∠ A) = 110°, then m (reflex ∠ A) .... °.

c) The two vertically opposite angles are ....

d) Any two triangles are congruent if ....

e) The measure of the straight angle= ....

2   **Choose the correct answer:**

a) The angle of measure 40° complements an angle of measure ....

          1. 50°   2. 330°   3. 60°   4. 140°

b) If: Δ ABC ≡ Δ XYZ, then $\overline{AB}$ ≡ ....

          1. $\overline{XY}$ 2. $\overline{YZ}$ 3. $\overline{XZ}$ 4. $\overline{LM}$

c) The sum of measures of the accumulative angles at a point = ...

          1. 360°   2. 180°   3. 90°   4. 270°

d) $\overline{AB}$ .... $\overleftrightarrow{AB}$.

          1.   2.   3.   4.

e) In the opposite figure: y= ....

1. 50°   2. 60°

3. 40°   4. 90°
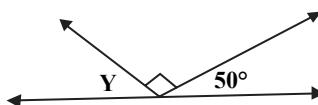
3 **a)** Draw $\angle$ ABC it's measure 90° (using the compass and the ruler) bisect $\angle$ ABC (Don't remove the arcs).

b) In the opposite figure:

m ($\angle$ AMB) = 45°, m ($\angle$ AMD) = 90°

and m ($\angle$ CMB) = 120° find : m ($\angle$ CMD)
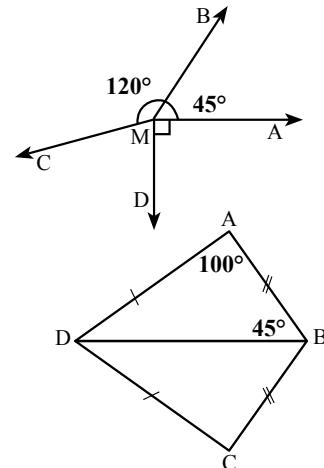
4 **a) In the opposite figure:**

AB = BC , DA = DC

m ($\angle$ ABD) = 45° and m ($\angle$ BAD) = 100°

Find: m (< ADC)

b) In the opposite figure:

$\overrightarrow{AD}$ // $\overline{BC}$, m ($\angle$ EAD) = 45° and m ($\angle$ DAC) = 30°

Find: m ($\angle$ E)= 90°, DE = 5 cm

and FE = 12 cm

Find: (DF)^2

5 **a) In the opposite figure:**

Thw two pentagon shown are congruent

Complete:

a) B correspond to ....

b) The polygon BLACK is congruent to the polygon ....

c) KB = ... cm.

d) m ($\angle$ E) = m ($\angle$ ....)

e) CA = ...

f) m ($\angle$ A) = ... m ($\angle$ ....)
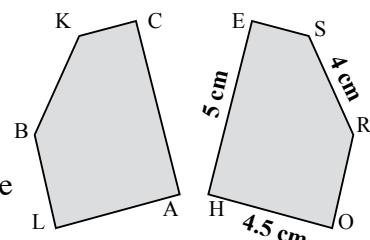
b) In the opposite figure:

$\overrightarrow{BD}$ bisects $\angle$ A = 70° and m ($\angle$ CDB) = 100°

Find: m ($\angle$ C)
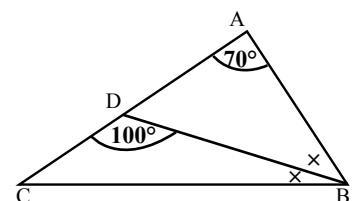
❶ Choose the correct answer:

a) If m ($\angle$ A) = 160°, then m (reflex $\angle$ A) = ...

   1) 100°   2) 80°   3) 160°   4) 200°

b) If: $\triangle$ ABC $\equiv$ $\triangle$ XYZ, then $\overline{BC}$ $\equiv$ ....

   1) $\overline{XY}$ 2) $\overline{YZ}$ 3) $\overline{XZ}$ 4) $\overline{AB}$

c) The angle of measure 70° complements an angle of measure ....

   1) 120°   2) 20°   3) 110°   4) 90°

d) If a straight line intersects two parallel lines, then each two alternate angles are ....

   1) equal in measure 2) supplementary 3) complementary   4) adjacent

e) In this figure: What is the value of x?

   1) 40°   2) 60°   3) 80°   4) 100°
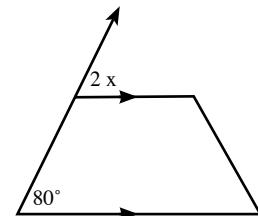
❷ Complete the following:

a) The sum of the measures of the accumulative angles at point = ...

b) Two triangles are congruent if two angles and .... are congruent to their corresponding in the other triangle.

c) If two straight lines are parallel to third line, then they are ....

d) The measure of the straight angle = ...

e) If: $\overline{AB}$ $\equiv$ $\overline{CD}$ then AB - CD = ...

❸ a) Using your geometrical tools to draw $\angle$ ABC of measure 70° then bisect it.

b) In the opposite figure:

AXYD $\equiv$ BXYC, XB = 2 cm, DC = 8 cm, and BC = 3 cm

Complete: 1) M ($\angle$ BCY) = M ($\angle$ ....)

        2) AB = ... cm

        3) DY .... cm

        4) M ($\angle$ BXY) = ...°
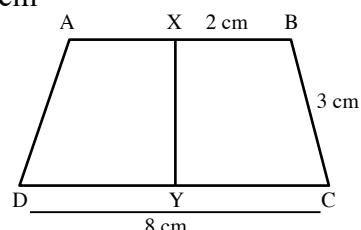
        5) The perimeter of the figure ABCD = ... cm

4 a) In the opposite figure:

$\overleftrightarrow{AB} \cap \overleftrightarrow{EC} = \{0\}$, m ($\angle$ FOA) = m ($\angle$ COA)

Find: 1) m ($\angle$ AOC)   2) m ($\angle$ COB)
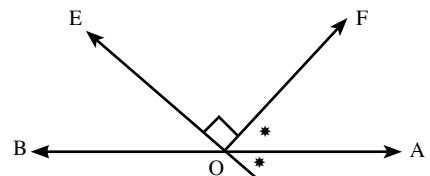
b) In the figure opposite:

AB = AC and DB = DC, m ($\angle$ C) = 50°

- IS Δ ADC ≡ Δ ADB? Give reasons.

- FIND: m ($\angle$ B)
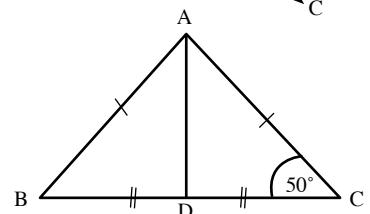
5 a) In the opposite figure:

$\overrightarrow{BA}$ // $\overline{CD}$, $\overrightarrow{DE}$ // $\overline{CB}$ and m ($\angle$ B) = 70º

Find : M ($\angle$ D)
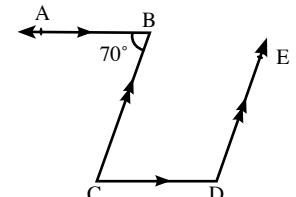
b) In the opposite figure:

$\overrightarrow{YN}$ bisects

MYZ where M ∈ $\overrightarrow{XY}$

Show that: $\overline{XZ}$ // $\overrightarrow{YN}$

Minia	**19**	Minia Educational Zone
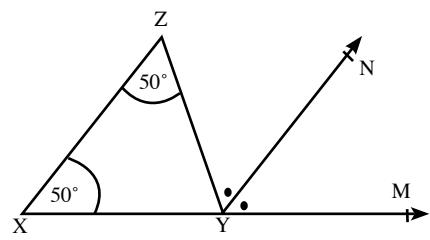
1 Complete:

a) The sum of two complementary angles = ... °.

b) The longest side in the right-angled triangle is ....

c) In the opposite figure: a = ...

d) If two straight lines intersect, then the measure of each two vertically opposite

angles are ....

e) When a transversal cuts two parallel lines, then the alternate angles are ....
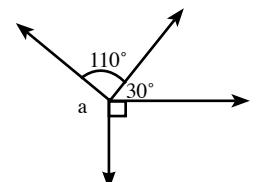
❷ Choose:

a) The sum of measures of the accumulative angles at a point is ....° .

(180° - 90° - 306° - 360°)

b) In the figure M $\angle$ DBE = ...°.   (134° - 45° - 90° - 180°)
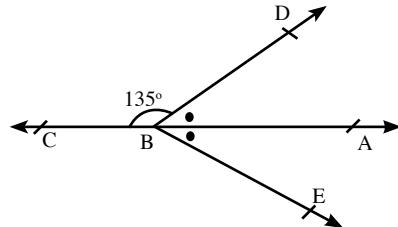
C) The type of angle of measure 190° is ....   (straight - right - obtuse - reflex)

d) The supplements of the angle 117° is ....   (73° - 63° - 117° - 27°)

e) OC = OD, OB = OA, m $\angle$ (COB) = 30°

m (< B) = 125° then m $\angle$ D equals ....

(25° , 60° , 30° , 125°)
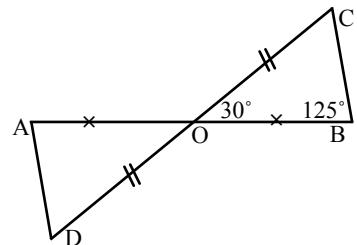
❸ a) State two cases of congruency of two triangles?

b) In the figure opposite $\overrightarrow{RX}$ // $\overrightarrow{TY}$, m ($\angle$ R) = 60°

m (T) = 50°. Calculate m ($\angle$ RST)
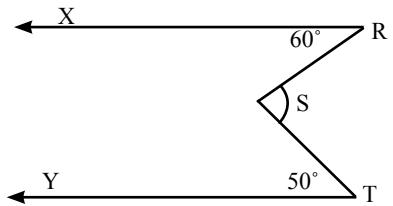
❹ In the figure opposite.

$\overleftrightarrow{OR}$ is the axis of symmetry of NERAM, O $\in \overline{NM}$

a) **Complete:**

The quadrilateral NERO is congruent to

the quadrilateral ....

- The common side of the two congruent

quadrilaterals is ....

b) In your own words explain why each of the following statements must be true.

1. O is the mid-point of $\overline{NM}$.
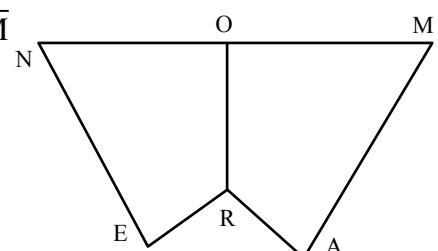
2. $\angle$ NOR is congruent to $\angle$ M O R

3. $\overline{RO} \perp \overline{NM}$

4. $\overline{OR}$ is congruent to $\overline{OR}$

5 a) $\overleftrightarrow{AB}$ // $\overleftrightarrow{CD}$ then complete:

m ($\angle$ ACD) = m ($\angle$ ....) = ...°

b) In the figure opposite:
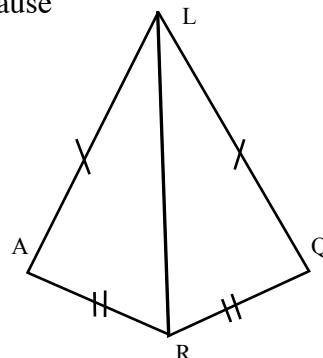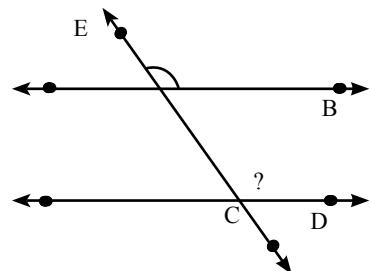
Δ .... $\equiv$ Δ .... because

L Q = ...

L R is ....

AR = ...

1 **Choose the correct answer:**

a) The sum of the measure of accumulative angles at point is ....

   1. 90°   b) 108°   c) 180°   d) 360°

b) The complement angle of the angle whose measure 65° is.........

   1. 15°   2.150°   3. 180°   4. 295°

c) If L_1 // L_2 and L_1 // L_3 then ....

   1. L_2 // L_3 2. $L_2 \perp L_3$ 3. L_2 intersects L_3 4. $L_1 \perp L_2$

d) m ($\angle$ A) 100°, then m (reflex $\angle$ A) = ...

   1. 80°   2. 100°   3. 260°   4. 170°

e) It Δ ABC in which m ($\angle$ A) + m ($\angle$ B) = 125 then m ($\angle$ C) = ...

   1. 55°   2. 65°   3.35°   4. 105°

2 **Complete each of the following:**

a) Every two vertically opposite angles are ....

b) If: $\angle$ X $\angle$ Y then m ($\angle$ X) - m ($\angle$ Y) = ...

c) The outer sides of two adjacent supplementary angles are ....

d) If Δ ABC = Δ XYS then AC = ...

e) If $L_1 \cap L_2 = \varnothing$ then L_1 .... L_2.

❸ a) **Complete:**

Two triangles are congruent if each side

of one triangle are ....

d) In the opposite figure

AC = AB , DC = DB

Prove that $\overrightarrow{AD}$ bisects $\angle$ BAC
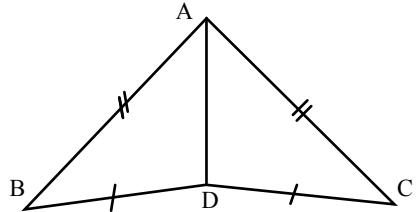
❹ a) Use the geometric tools to draw an
angle of measure 60°.

b) In the oppsite figure,

m ($\angle$ CMB) = 110°

$\overleftrightarrow{AB} \cap \overleftrightarrow{CD}$ = {M} , $\overline{MC}$ bisects $\angle$ ABC

and m ($\angle$ AMC), ($\angle$ AME) , m ($\angle$ AMD)
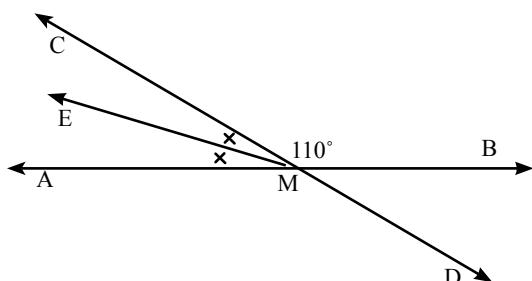
❺ **In the opposite figure:**

$\overline{AB}$ // $\overline{CB}$ // HO, m ($\angle$ A) = 35°

and m ($\angle$ H) = 40°

Find: 1. m ($\angle$ ACD)   2. m ($\angle$ DCH)

3. m ($\angle$ ACH)

NAHDET MISR

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Answer the following questions:

1 Choose the correct answer

1) The supplement of the angle whose measure is 75° is an angle whose measure is ....

    a) 60°   b) 180°   c) 105°   d) 90°

2) If △ ABC ≡ △ XYZ and $m(\angle A) + m(\angle Y) = 120°$, then $m(\angle Z)$ = ...

    a)50°   b) 60°   c)70°   d) 80°

3) The sum of measure of the accumulative angles at a point equals.........................

    a) 180°   b) 360 °   c) 630°   d) 603°

4) If the two straight lines are perpendicular to a third , then the two

straight lines are ....

    a) perpendicular   b) congruent   c) intersecting   d) parallel

5) A square with perimeter 20 cm , then it's area is .... cm^2

    S = P ÷ 4 = 20 ÷ 4 = 5
    area = S×S = 5×5 = 25 cm²

    a) 4   b) 5   c)25   d) 400

6) The triangle whose perimeter is 12 cm. and the lengths of its two sides are 2 cm. , 5 cm. , is called ....

    a) isosceles   b) equilateral   c) right   d) scalene

2 complete the following :

a) The two diagonals are perpendicular in ....Rhombus............ , ...Square...............

b) The perpendicular bisector of a line segment is called axis...o.f....symetry.

c) The two right angled triangles are congruent if .... measur.........
                hybotinies and side

d) If $\angle (A)$ supplements $\angle (B)$ and $\angle (A) \equiv \angle (B)$ then $m \angle (B) = $ ....90....

e) If $AB \equiv XY$, then $AB - XY = $ ...Zero...

---

3 a) State any two cases of congruency of two triangles.

b) Draw a line segment $\overline{AB}$ of length 6 cm, then draw its symmetry axis.

c) In the opposite figure :
  1-$\angle BC) = \angle DC) - 2 - \angle AB) = \angle AD) -$
  1) prove that $\triangle ABC \equiv \triangle ADC$ $\angle AC)$ is a common side
  2) find $m (\angle BAC)$ $60°$

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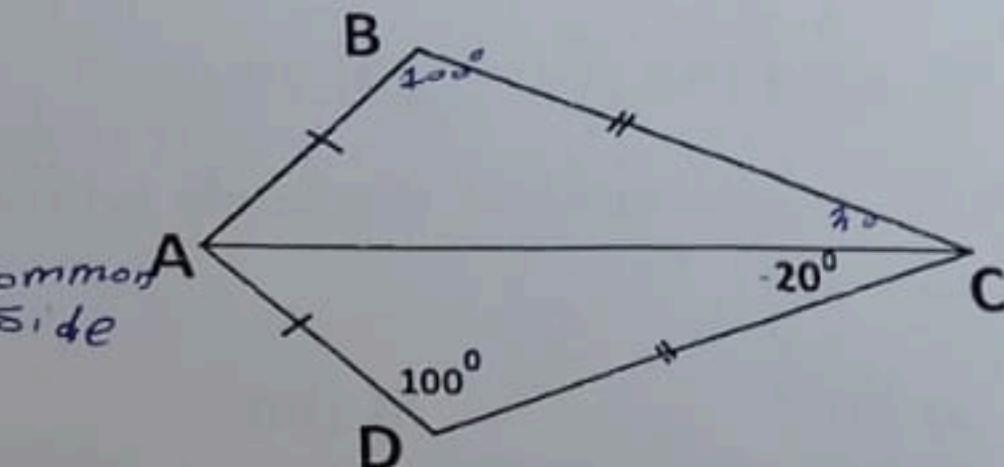
4 a) In the opposite figure :

$m(\angle C) = 80°$, $\overline{CB} \cap \overline{AD} = \{M\}$, $MB = MC$

$MD = MA$, $CD = 5$ cm. Mention the conditions
1-$\angle AM) = \angle DM) - 2 - \angle BM) = \angle CM) - 3 - M\angle DMC)$ and $M\angle BMA)$ are vertically opposite angle
for $\triangle ABM$, $\triangle DCM$ to be congruent and find $m(\angle B) = 80°$

b) In the opposite figure :

ABC is a triangle where the point $A \in \overrightarrow{CD}$

$\overrightarrow{AE} \parallel \overline{CB}$, $m(\angle DAE) = 70°$ and

$m(\angle EAB) = 55°$, Calculate measure of each angle in the triangle ABC

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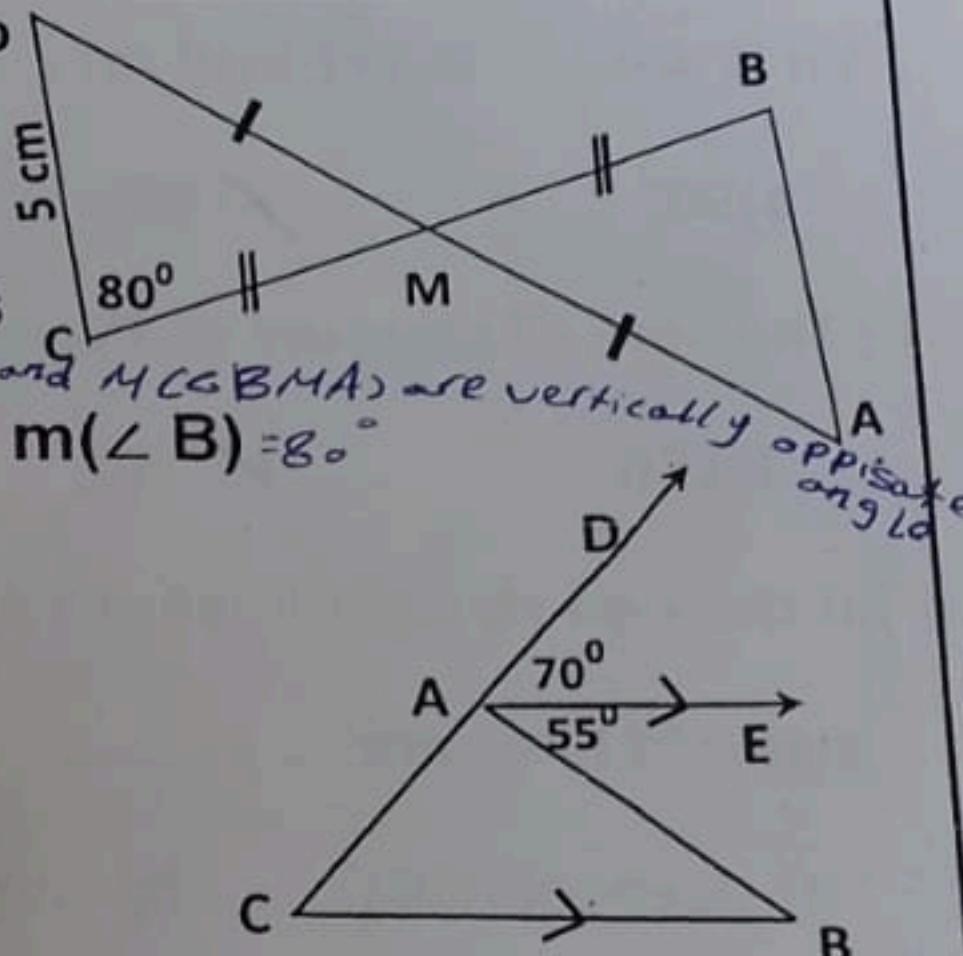
5 a) In the opposite figure :

If $\overrightarrow{AB} \parallel \overline{CD}$, $m(\angle D) = 65°$, $m(\angle A) = 115°$

Find $m(\angle C) = 65$

Is $\overline{AC} \parallel \overrightarrow{DE}$?   (Give the reason)
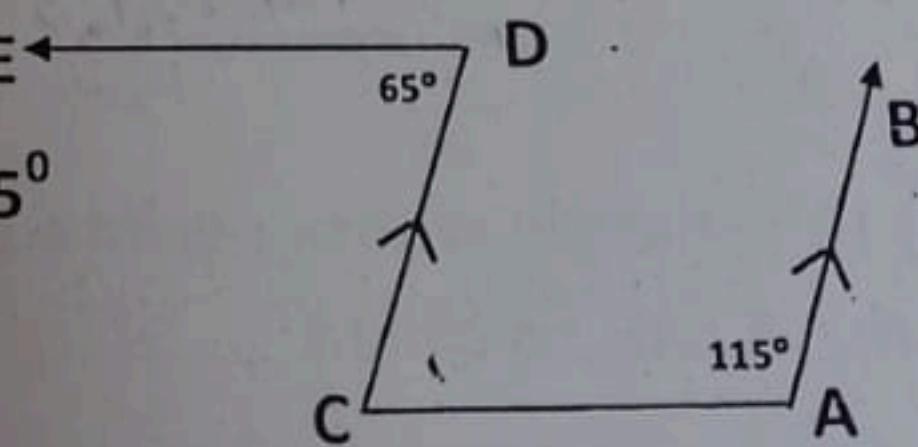
b) In the opposite figure :

$m(\angle ZMY) = 110°$, $m(\angle XMZ) = 90°$

$m(\angle YML) = 50°$

Find by steps $m(\angle XML)$ $110°$

AL -Azhar AL - Sharif
Central Administration of Cairo Zone
1" Year Preparatory Exam
First Term 2021 / 2022
Subject : Geometry   Time : 1:30 Hours

الأزهر الشريف
الإدارة المركزية لمنطقة القاهرة الأزهرية
امتحان النقل من الصف الأول الإعدادي
الفصل الدراسي الأول للعام الدراسي ٢٠٢١ / ٢٠٢٢ م
الهندسة لغات   الزمن : ساعة ونصف
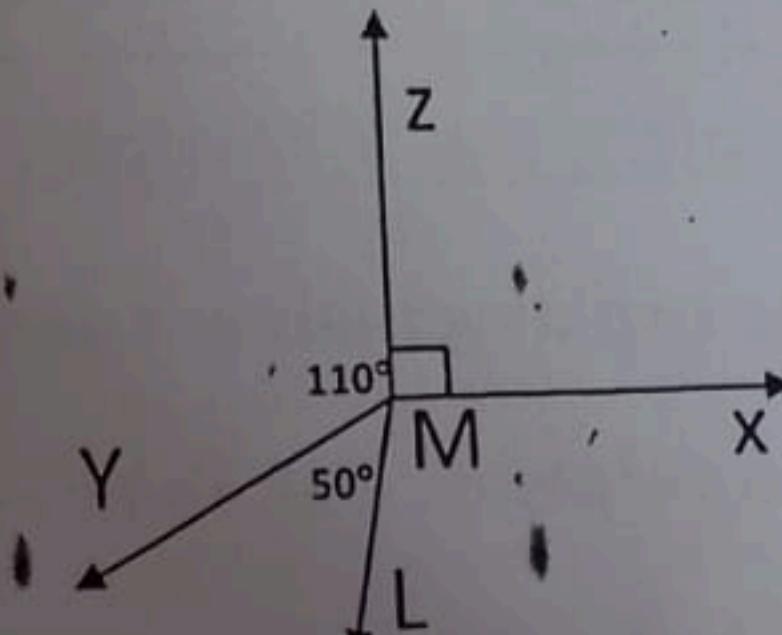
Answer the following questions :   (5 marks for each question)

First question : Choose the correct answer from those given:

a) The supplement of angle whose measure is 30˚ = ...   [30 , 60 , 120 , 150]

b) If two straight lines intersect then each two .... angles have the same measure .
            [corresponding , alternate , vertically opposite , adjacent]

c) The two straight lines that are perpendicular to a third , then the two straight
   lines are ....   [perpendicular , intersecting , parallal , congruent]

d) The sum of the measure of the accumulative angles at a point = ...˚ .
            [306 , 360 , 180 , 450]

e) If △ A B C ≡ △ X Y Z and m (∠A) + m (∠B) = 100˚ ,then m (∠ Z) = ...˚
            [50 , 80 , 90 , 100]

Second Question : Complete the following :

a) **In the opposite figure :**
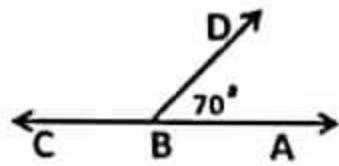
If B ∈ $\overleftrightarrow{AC}$,
then m (∠ DBC) = ...˚

b) **In the opposite figure :**
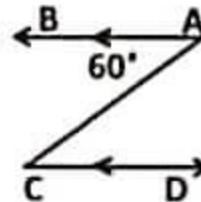
If $\overrightarrow{AB}$ // $\overrightarrow{CD}$,
then m (∠C) = ...˚

c) **In the opposite figure :**
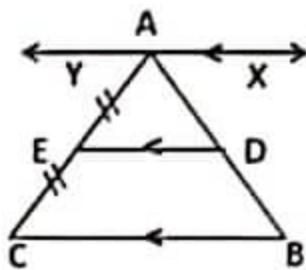
$\overleftrightarrow{XY}$ // $\overline{DE}$ // $\overline{BC}$, A E = E C ,
then A D : A B = ... : ....

d) The perpendicular bisector of a line segment is called

e) If △ A B C ≡ △ D E O , then A C = ...

Third Question :

a) **In the opposite figure :**
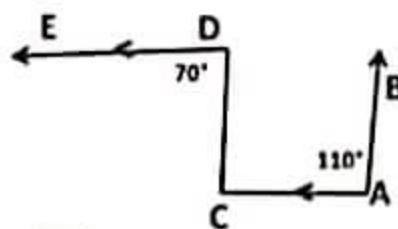
If $\overrightarrow{DE}$ // $\overline{AC}$, m (∠ A) = 110˚ ,
m (∠ D) = 70˚
Find : m (∠ C) , is $\overleftrightarrow{AB}$ // $\overleftrightarrow{CD}$?

b) **In the opposite figure :**

If A B = P C , A D = D C
m (∠ ADB) = 50˚
m (∠ BAD) = 110˚
Write the condition for
△ A B D ≡ △ C B D

, then find m (∠ ABC).

CAIRO EDUCATIONAL ZONE
MATHEMATICS SUPERVISION FOR G. & D. L. S.
FIRST TERM EXAM FOR FIRST FORM PREP.
الصف الأول الاعدادى رياضيات (هندسـة)

TIME ALLOWED : 2 HOURS
MATHS (GEOMETRY)
امتحان الفصل الدراسى الأول يناير ٢٠٢٠
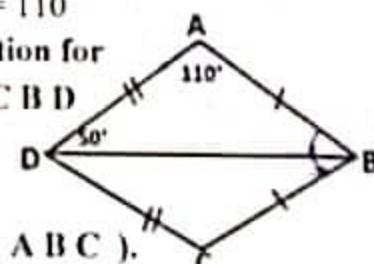
Answer the following question

(أسئلة الامتحان فى صفحتين)

1) Choose the correct answer :

a) The sum of the measures of the accumulative angles at a point is ....

[45° or 90° or 180° or 360°]

b) If △ ABC ≡ △DEF , m (∠B) + m (∠C) = 100° , then m (∠D) = ...

[50° or 80° or 260° or 100°]

c) the angle whose measure 100° , its type is ....   [acute or obtuse or right or reflex]

d) In the opposite figure:
   If △ABC ≡ △ DEF ,
   then the perimeter of △ABC = ...

[9cm or 11cm or 12cm or 16cm]

e) The number of triangles in the figure ⟋⟍ equals ....   [3 or 5 or 6 or 7]

f) The measure of each of the two equal supplementary angles ....

[180° or 45° or 360° or 90°]
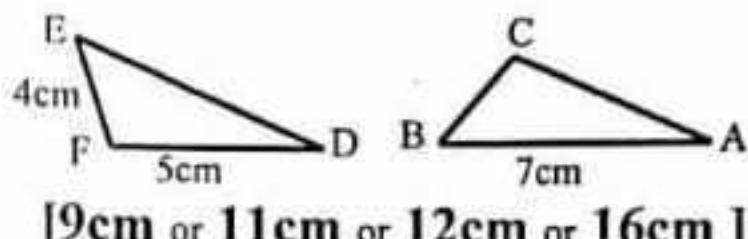
2) Complete :

a) If m(∠ A) = 105°, then m (reflex ∠ A) = ...°

b) If a straight line intersects two parallel straight lines, then each two corresponding angles are ....

c) If the side length of a square is 5 cm then its area = ...

d) Two triangles are congruent if two sides and the .... of one triangle are congruent to the corresponding parts of the other triangle.

e) If two straight lines are parallel to a third straight line, then these two straight lines are ....

3)a) In the opposite figure :
   M is the point of intersection of $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$,
   $\overrightarrow{ME}$ bisects ∠AMC, and m(∠BMC) = 116°.
   Find: m(∠AME), m(∠AMD).
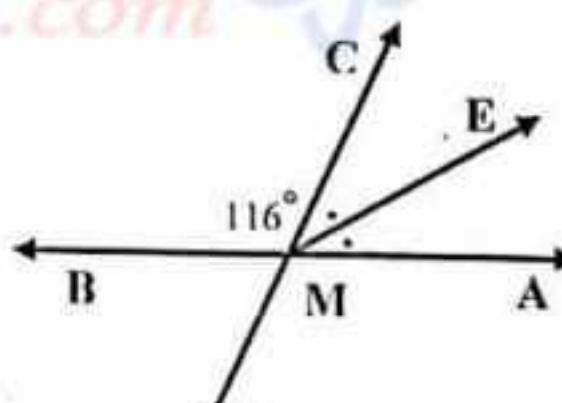
   b) In the opposite figure :
   AB = AC , BD = CD
   m(∠CAD) = 30°
   Prove that △ABD ≡ △ACD
   then find m(∠BAC).
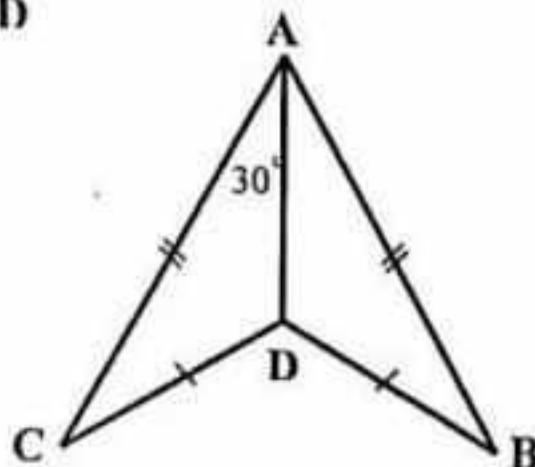
4)a) In the opposite figure :

$\vec{AB} \parallel \vec{CD} \parallel \vec{EF}$,

$m(\angle A) = 45^\circ$, $m(\angle E) = 130^\circ$
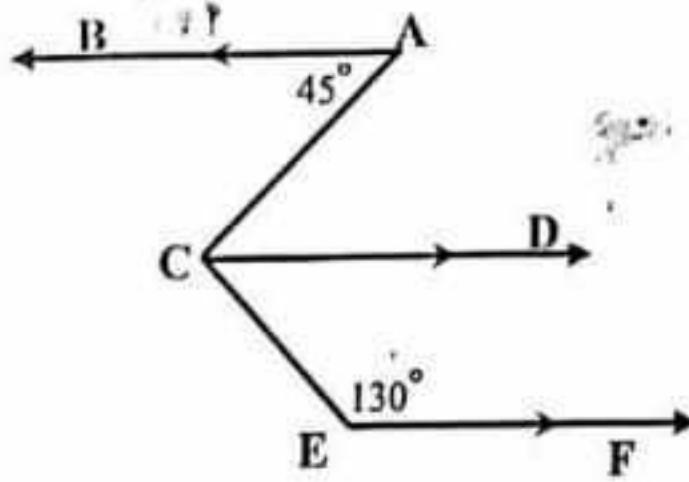
Find : $m(\angle ACE)$

b) Using the geometric instruments , draw $\angle ABC$ of measure 110° , then draw $\vec{BF}$ to bisect the angle .   (Don't remove the arcs)

5)a) In the opposite figure :

The polygon ABCF $\equiv$ The polygon EDCF ,

$m(\angle EFC) = 110^\circ$, BC $= 5$ cm

Find :

$m(\angle AFC)$, $m(\angle AFE)$ and the length of $\overline{BD}$
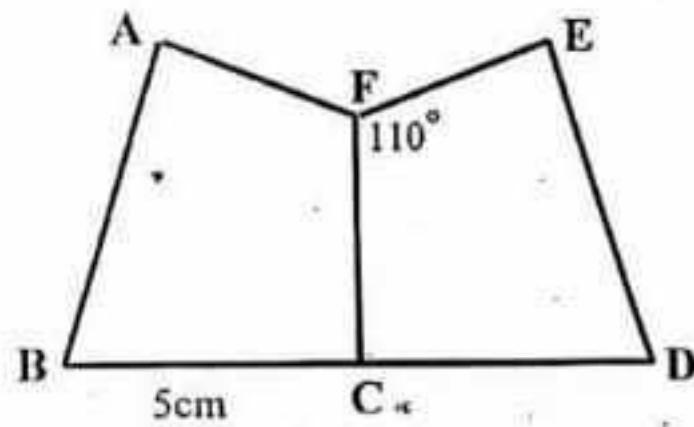
b) In the opposite figure :

$\vec{DE} \parallel \vec{AC}$,

$m(\angle D) = 70^\circ$, $m(\angle A) = 110^\circ$

Find : $m(\angle C)$

Prove that : $\vec{AB} \parallel \vec{CD}$

انتهت الأسئلة
GOOD LUCK
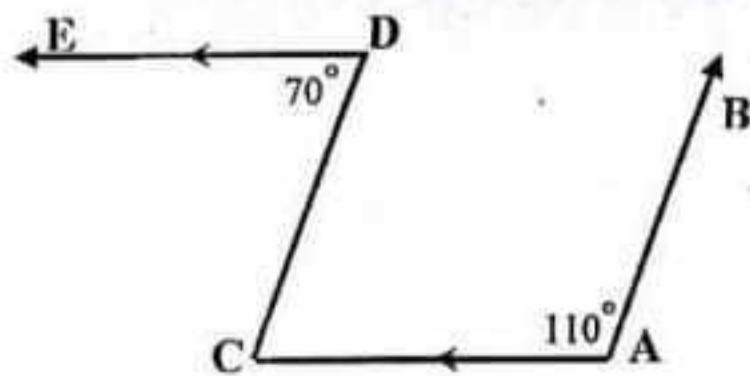
First PREP. Exam Geo.   First term
Time :

1) choose the correct answer :

1- the two diagonals are perpendicular and equal in length in the .... [rectangle , rhombus , square ,triangle]

2- the sum of measures of the accumulative angles at point is .... [360° , 270° , 180° , 90°]

3- from the opposite figure x =....°. [20,30,40,80]
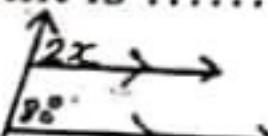
4- if < x = < y , < x ,< y are complemntry angles, then m (<y) = ... [45°, 90°, 180°, 360°]

5- if △ ABC ≡△ XYZ and m (< x)+ m (< z) = 130° then m (< B) =........[30°, 45° , 50° , 90°]

6- the acute angle supplements ....angle [aright , an obtuse , an acute , zero]

2) complete :

1- if m (<A) =115° then m (reflex <A)= 245

2- in the opposite figure :
L₁ // L₂ , then x= 80
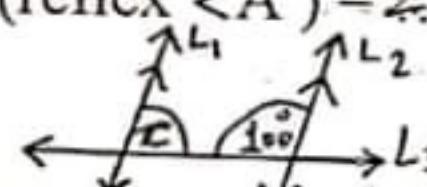
3- if △ABC ≡ △XYZ , then AB = XY

4- the . measure of straight angle is 180°

5- the number of triangles in the opposite figure equals 8
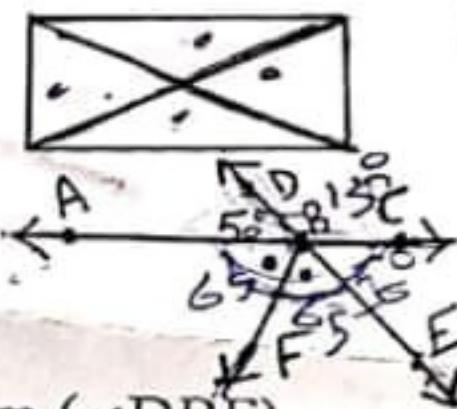
3) @ in the opposite figure : AC∩DE = {B} , m (<ABD) =50°
BF bisect <ABE find :

1) m (<DBC)   2) m (<ABE)   3) m (<FBC)   4) m (<DBF)

b) from the opposite figure :
is △ABD ≡ △CBD (give reason)
Then fined: m (<ABD)
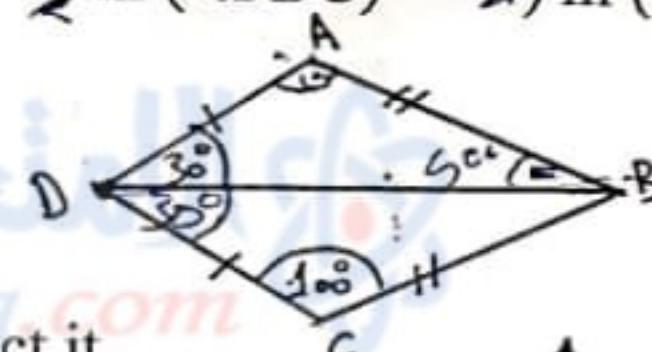
4) @ Draw < ABC of measure 100 and bisect it

b) In the opposite figure m (< BEC) = 130 , EB⊥EA and ED bisect < AEC
find :   1) m (<AEC)   2) m (<BED)

5) @ in the opposite figure :
BA // DC , DE // CB ad
M (<ABC) = 70°
Find ;   1) m (<BCD)   2) m (<CDE)
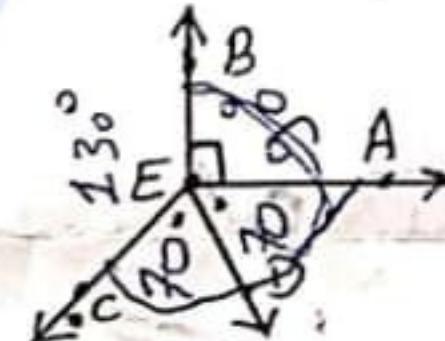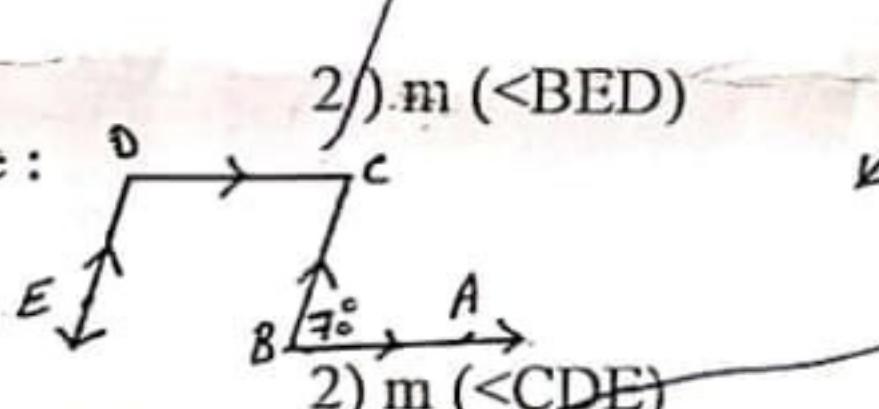
b) in the opposite figure :
BD bisect < ABC, m (< ADB) = m (ADC)
AB = 8 cm , CD = 6 cm
1) is ABD ≡ CBD ? why ?
2) find : CB and AD (by steps)
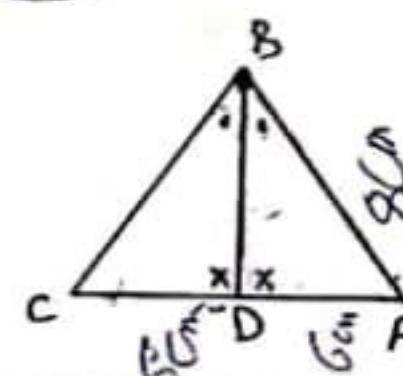
Good Luck

| Subject: Goemtry The First grade preparatory Time:*2hour*	Midterm Exam of the First grade preparatory	Youssef Elsebaei School languages

sama

1-choose the correct answer:

1)In the opposite figure : $\overleftrightarrow{AF} \| \overleftrightarrow{DE} \| \overleftrightarrow{CB}$, AE=EC, then

AD:AB=......:......   (2:1, 3:2 ,1:3 ,1:2)

2)If two Straight lines intersect ,then each two........angles have the same measures. (adjacent ,alternate , corresponding, vertically opposite)

3)The two adjacent angle formed by intersecting a straight line and ray are ....(Complementary , supplementary, parallel, equals)

4)The axis of symmetry of a line segment is ....(parallel to it, equal to it , perpendicular from its midpoint, congruent to it)

5) If $\triangle ABC \equiv \triangle XYZ$, then BC =.................(AB, XY, XZ, YZ)

6)IF the ratio between two supplementary angles is 7: 13 then the measure of the smaller angle is ....degree.(70 , 60 , 63 , 50)

2-Complete the following:

1) The number of triangles in the opposite figure equals ...8.........
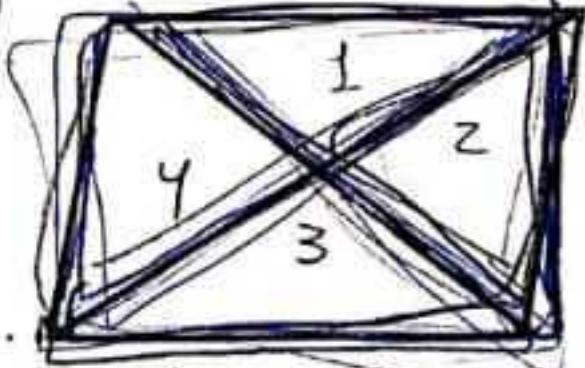
2) The two straight lines that are perpendicular to a third , then the two straight are..equal in measure..

3) If < x complementary < y , m(< y)= m(< x), then the m(< x) =..90÷2=.45.

4)The of the measure of the accumulative angle at point =..360°..degree

5) The opposite figure . If $\overrightarrow{MB} \cap \overleftrightarrow{AC}= \{M\}$, m(< AMB)=60°, x =..40.....°
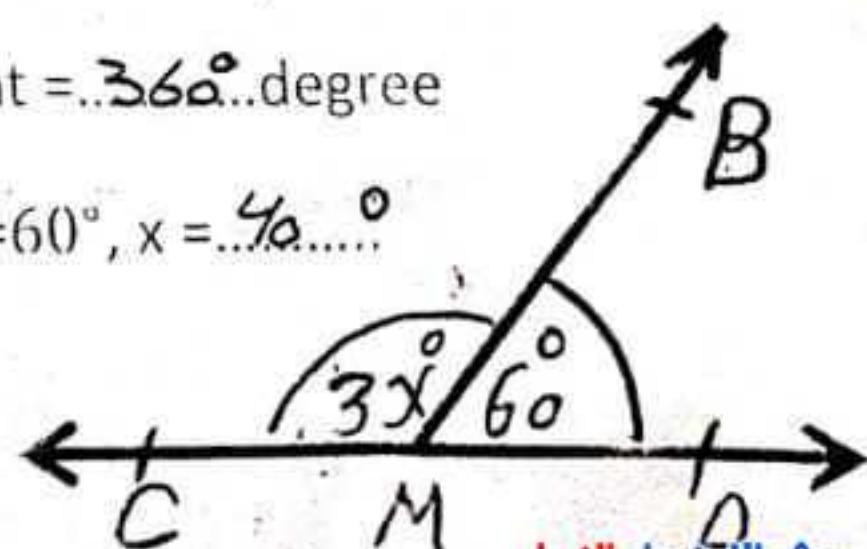
180-60=120÷3=40°

Q3)a) Mention two cases of congruency of two triangle.

b) I n the opposite figure AB = BC ,AD =CD, m($\angle$ ABC)=40°

m($\angle$ ABD)=180° prove that $\triangle$ CBD $\equiv$ $\triangle$ ABD

$(80+4b)=60°+60°=120$

m($\angle$ABD)=120 And find m($<$ ABD).

3) is common side

AB=CB

Q4)a) In the opposite figure $\overrightarrow{DE}$ $\parallel$ $\overline{AC}$,

m($\angle$DCA)=m($\angle$C)=70° (alternative angles)

m($<$A) =110   yes, AB//CD

m($<$ D) =70

Find m($<$ C) .Is $\overrightarrow{AB}$ $\parallel$ $\overline{CD}$?

Given the reason.
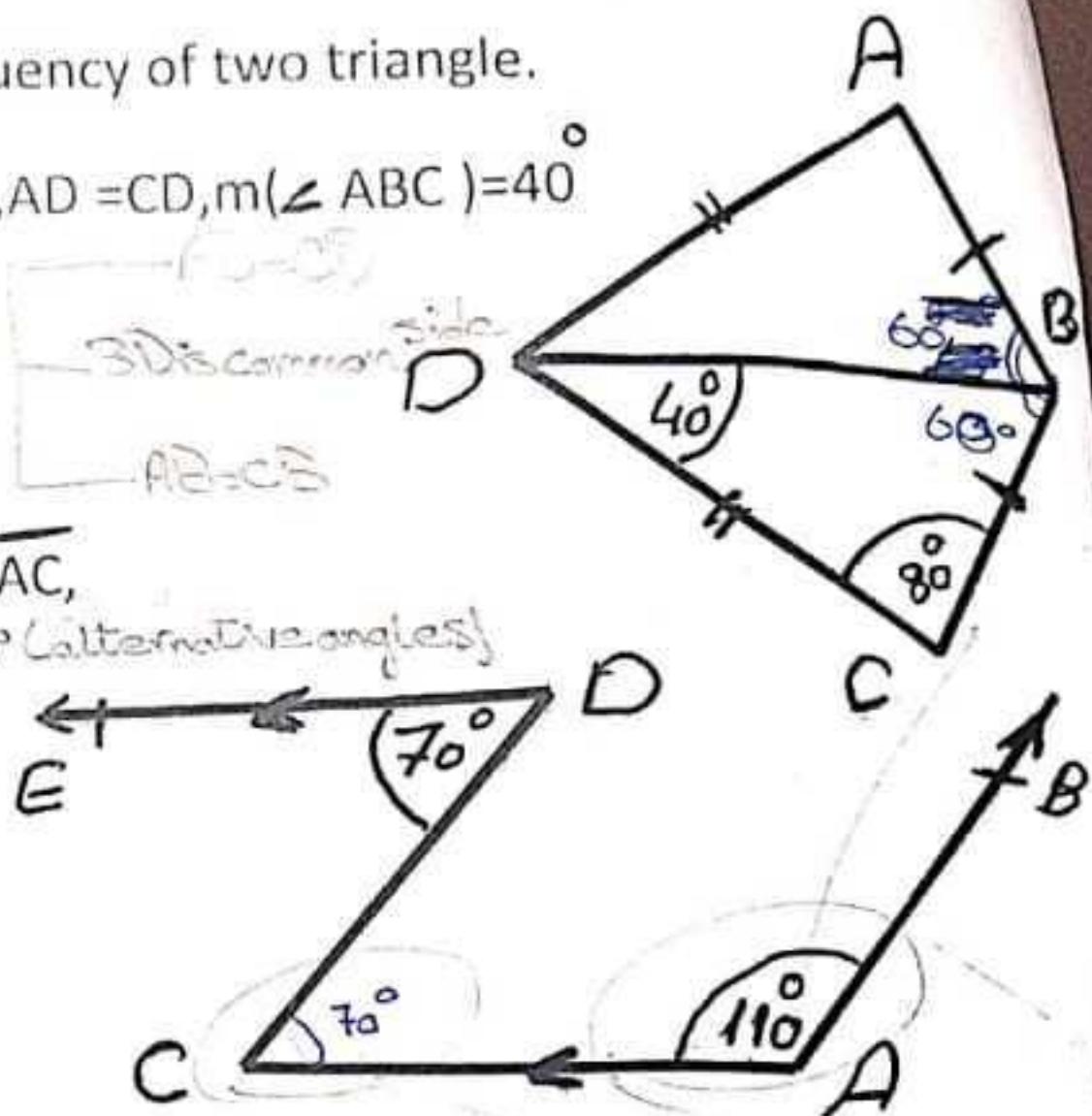
b) By using the ruler and the compasses draw the angle ABC
where ,m ($\angle$ B) = 60° and draw $\overrightarrow{BD}$ to bisect the angle

(Do not remove the arcs)

Q5) In the opposite figure BD bisects

$\angle$ABC, m($\angle$ BDC) = 110°, m($\angle DBC$) = 35°

($\angle$A)=180-(35+70)=75° m($\angle$DCB)=180-(35+110)=35

($\angle$A)=75°
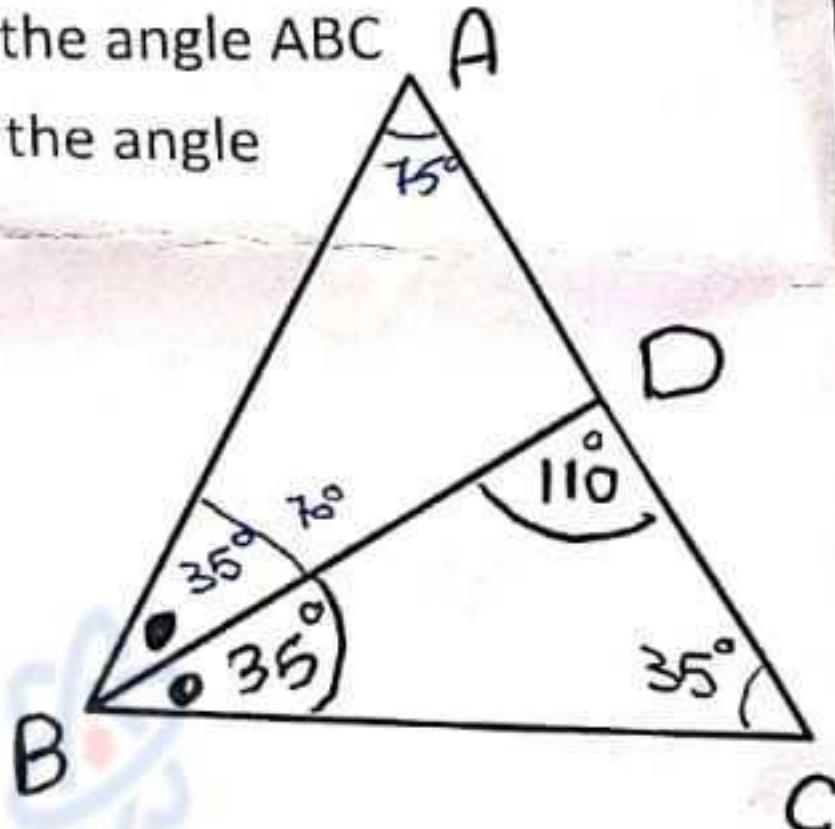
Find the m ($\angle$A). With degrees.

b)In all figures find the value of x

①
x= 80°

②
x = 60°

③
x = 100°

x = 40°
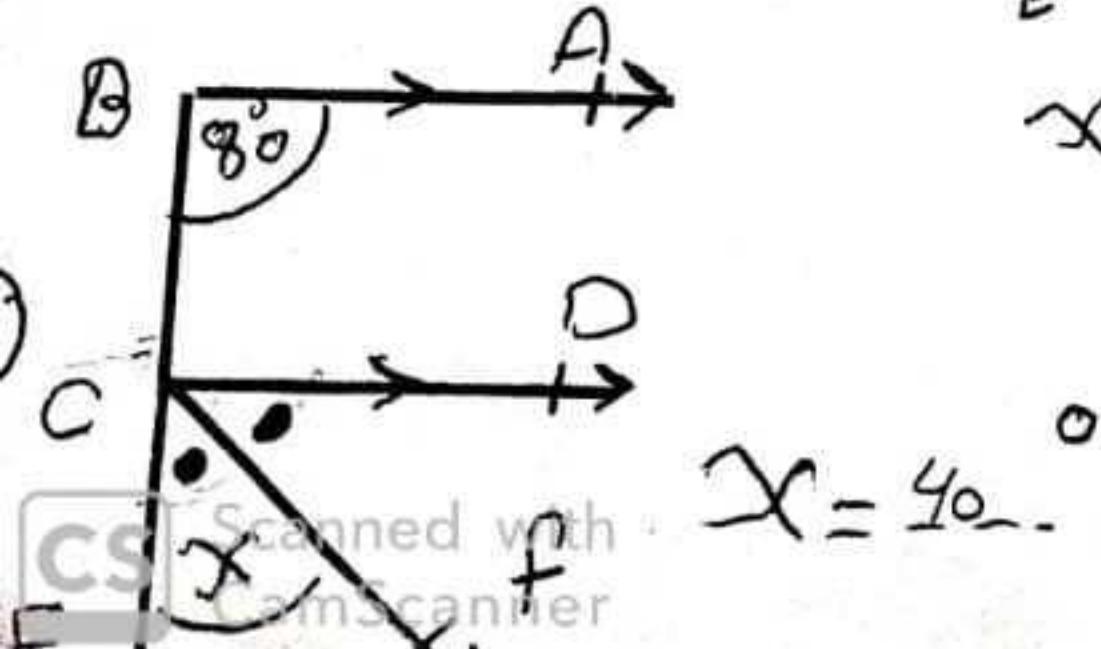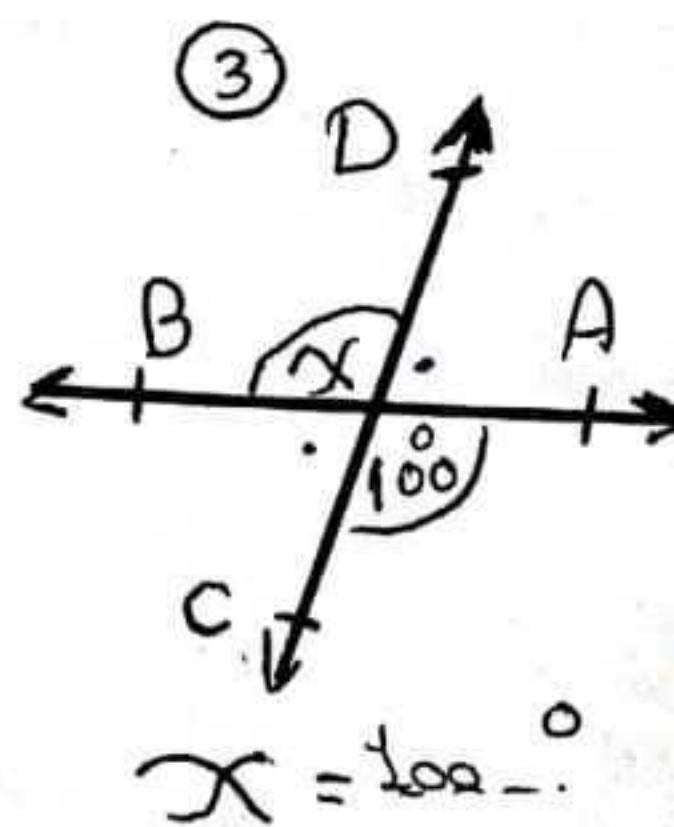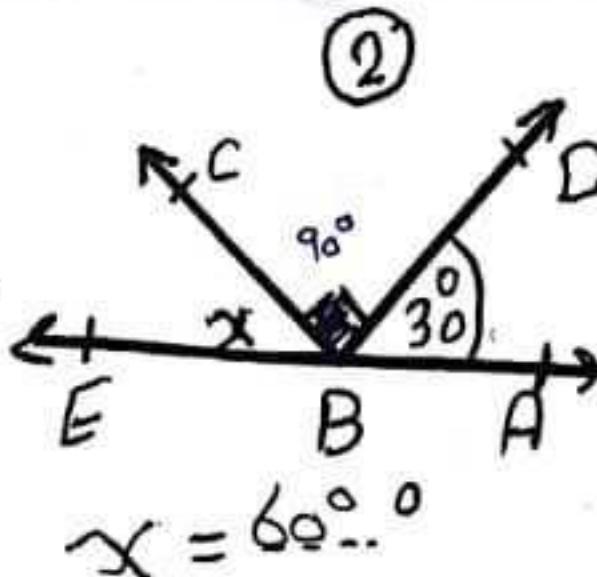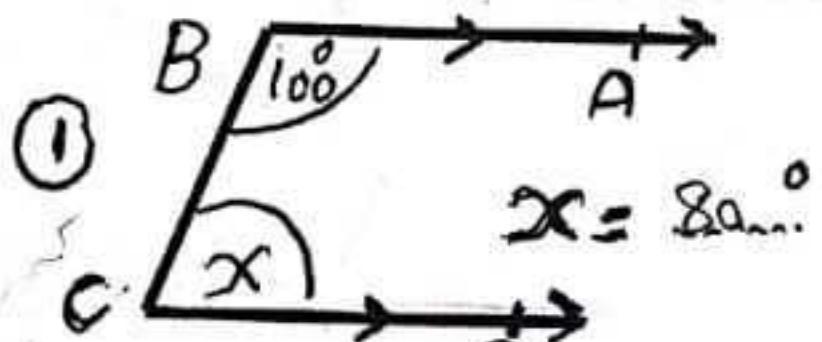
Question (1) *Choose the correct answer :*

(1) The sum of the measures of two adjacent angles formed by a straight line and a ray is ....° (360 , 180 , _90_ , 60)

(2) If m (∠B) = 150°, then the m (reflex ∠B) = ...° (90 , 180 , _210_ , 360)

(3) The axis of symmetry of the line segment is .... to it.

(equal , congruency, parallel , _perpendicular bisector_)

(4) If △ ABD ≡ △ xyl then $\overline{yl}$ ≡ ··· ($\overline{AB}$, $\overline{xy}$, $\overline{BD}$, AD)

(5) The angle whose measure is 37° complements an angle of measure ....°

(37 , _53_ , 63 , 143)

(6) The angle whose is greater than 90° but less than 180° is called ....

(acute, _obtuse_, straight, reflected)

Question (2) *Complete the following :*

(1) In the opposite figure:

$\overrightarrow{BA}$ // $\overrightarrow{CD}$, $\overrightarrow{BC}$ bisects , ∴ m∠(B) = 73° (6m.)
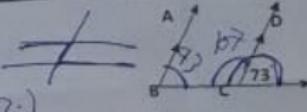
(2) The two triangles are congruent if two sides and .... are congruent with their corresponding in the other triangle.

(3) If m(∠A) ≡ m(∠B), and A , B are supplementary angles, then m(∠B)= 90°

(4) If a straight line intersects two parallel straight lines, then every two alternate angles .equal.
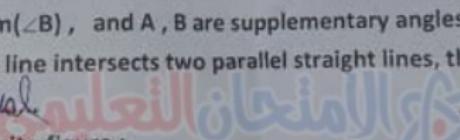
(5) In the opposite figure :

The two angles AMH , CMB are called .... (L O A)

Question (3): a) In the opposite figure:

m(∠ AMB)=130°, m(∠ DMB)=70°,

m(∠ AMC)=90°, Find m(∠ DMC)

360 – (130 + 90 + 70) = 70°
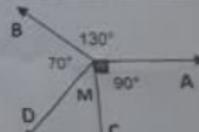
b) In the opposite figure:

m(∠BAC)=40°, $\overrightarrow{CE}$ bisects ∠ ACD,

m(∠DCE)=20°

Prove : $\overrightarrow{AB}$ // $\overrightarrow{CD}$

بقية الأسئلة خلف الورقة
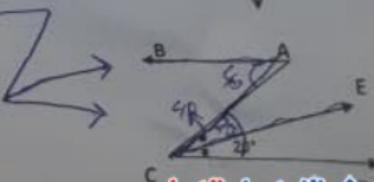
**Question (4):**

a) Draw $\angle ABC$ where $m(\angle ABC) = 120°$, using the ruler and the compasses
bisect $\angle B$ by $\overrightarrow{BD}$ (Don't remove the arcs)

b) In the opposite figure:
$\triangle ABC \equiv \triangle DHA$, $AH = 3cm$, $HD = 4cm$
Find the length of $\overline{CB}$, $\overline{HB}$
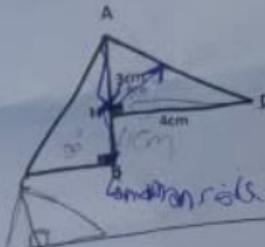
Question (5):

a) Mention two cases of congruency of two triangles.

b) In the opposite figure:
$\overrightarrow{DY}$ bisects $\angle XYZ$, $m(\angle DYZ) = 35°$,
$m(\angle YDZ) = 120°$.
Find $m(\angle X)$

Good Luck

Stage : First Prep.
Subject : Geometry
Time : Two hours

Mid- year Exam
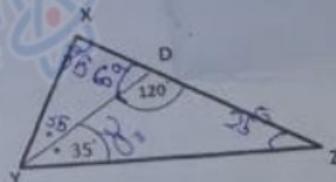
1) Choose :

1) The angle whose measure is more than 90° and less than 180° is ....

a) acute   b) right   c) obtuse   d) zero

2) The supplement of the angle whose measure 30°= ....

a) 60°   b) 150°   c) 180°   d) 90°

3) The sum of measure of the accumulative angles at a point = ...

a) 30°   b) 90°   c) 180°   d) 360°

4) If two straight lines are parallel to a third straight line, then these two straight lines are ....

a) parallel   b) perpendicular   c) intersected   d) orthogonal

5) If m ($\angle$A) $\equiv$ m ($\angle$B), $\angle$ A complements $\angle$B, then m ($\angle$A)= ....

    a) 15°   b) 30°   c) 45°   d) 60°

6) If $\triangle$ ABC $\equiv$ $\triangle$XYZ , then AC = ...

a) XY   b) XZ   c) YZ   d) AB

2) Complete :

1) The measure of the straight angle equals ....

2) If two straight lines intersect , then each two vertically opposite angles are ....

3) If m ($\angle$A) = 100°, then m (reflex $\angle$A)= ....°

4) The complement of an angle of measure 50° is ....°

5) The two adjacent angles formed by intersecting a straight line and a ray are ....

3) a] Mention two cases of congruency of two triangles

b] If $\overline{AB} // \overline{DC} // \overline{EF}$

and m ($\angle A$)= 45°, m ($\angle E$)=130°

Find 1) m ($\angle ACD$)

2) m ($\angle DCE$)

(with steps)
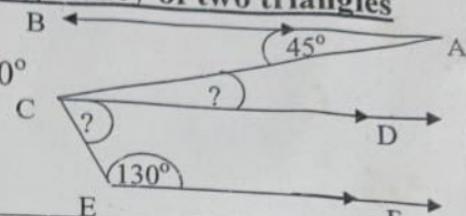
4) a] In the given figure :

m ($\angle AMB$) = 40°, m ($\angle BMC$) = 90°,

m ($\angle CMD$) = 110°

Find :   m ($\angle AMD$)

(with steps)
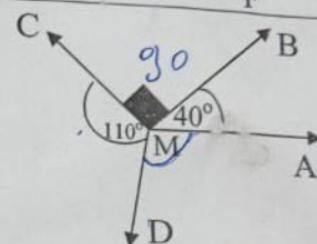
b] In the given figure :

If m ($\angle BAD$) = m ($\angle BCD$) = 90°

, AB= CB = 5cm

1) Are $\triangle BAD \equiv \triangle BCD$? Give reason

2) Find the length of $\overline{CD}$
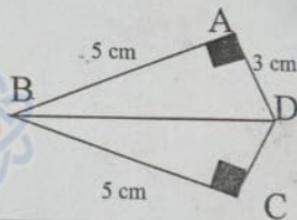
5) a) In the given figure :

$\overleftrightarrow{AF} // \overleftrightarrow{DX} // \overleftrightarrow{Ey} / \overleftrightarrow{BC}$,

AX = XY = YC and AD = 5 cm

Find the length of $\overline{DE}$ and $\overline{AB}$
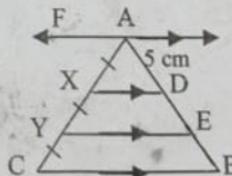
b) Draw < ABC where m (<B) = 80° , using the ruler and the compasses bisect∠B by $\overrightarrow{BD}$ (don't remove the arcs)

Alexandria governorate

East Educational Zone

Helalia Language School

Midyear Exam 2019-2020

Geometry middle (1)

Time Allowed (2 hours)

Alya yousry

1- **Complete:**

a) If $L_1 // L_2$ and $L_1 \perp L_3$, then L_3 .... L_2.

b) If $(< A) = 160°$ then m(reflex$< A$) = _____ °

c) If $\angle A$ supplements $\angle B$ and $\angle A \equiv \angle B$, then m ($\angle B$) = _____ °

d) The two complement angles are the two angles whose sum of their measures is _____

e) In the opposite figure m($< ECA$) = _____ °
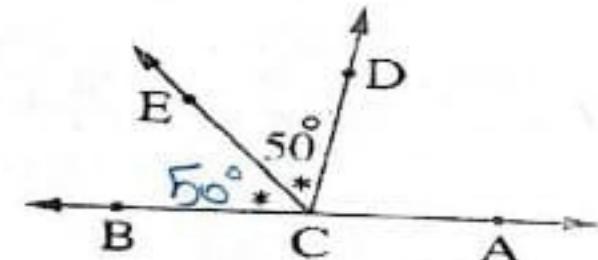
2 Choose the correct answer from the given ones

1- in the opposite figure: $\overrightarrow{CD} // \overrightarrow{BA}$, $\overrightarrow{DE} // \overline{CB}$

then : x = ...
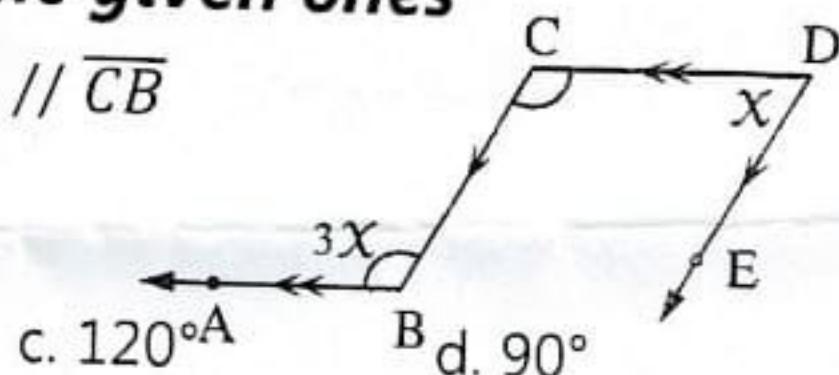
a. 60°   b. 45°   c. 120°   d. 90°

2- If $\Delta ABC \equiv \Delta XYZ$, $m(< A) + m(< B) = 100°$, then m ($< Z$) = _____ °

a. 30   b. 50   c. 80   d. 70

3- If the ratio between the measures of two supplementary angles is 5 : 13 , then the measure of the smaller angle is _____ °

a. 50   b. 130   c. 150   d. 180

4- The angle of measure 179° is _____ angle.

a. acute   b. right   c. obtuse   d. straight.

5- $\overline{XY}$ _____ $\overleftrightarrow{XY}$

b. $\in$ b. $\notin$ c. $\subset$ d. $\not\subset$

|

3- a) In the opposite figure:

AC = AB , DC = DB

Is Δ ADB ≡ Δ ADC ? why
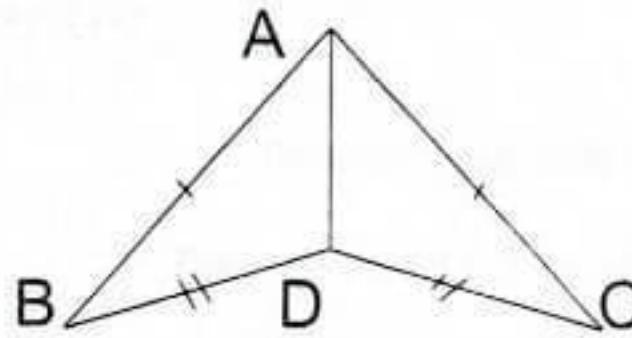
b) In the opposite figure:

$\overrightarrow{AD}$ // $\overrightarrow{BC}$, E ∈ $\overrightarrow{CA}$

m (∠DAE) = 70° and m (∠DAB) = 50°

Find the measures of each angles the triangle ABC
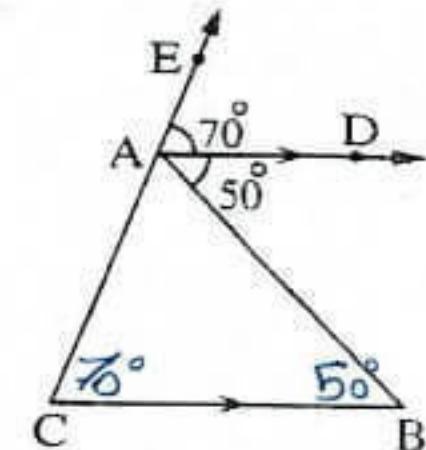
4- a) In the opposite figure:

m (∠A) = 40° , m (∠E) = 55°

$\overrightarrow{AB}$ // $\overrightarrow{EF}$ and $\overrightarrow{AB}$ // $\overrightarrow{CD}$

Find: m (∠ACE)
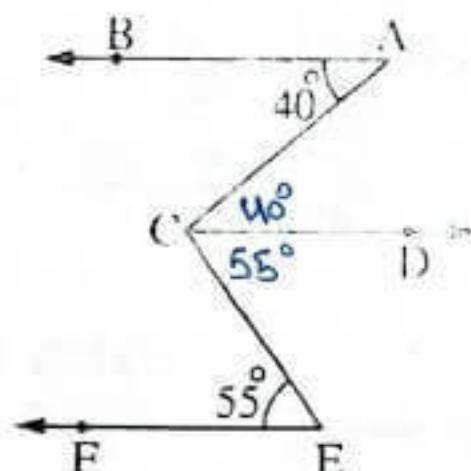
b) In the opposite figure:

m(< DBE) = 30°

<CBD is right angle

,m(< EBA) = 110°

Find : m(< ABC)
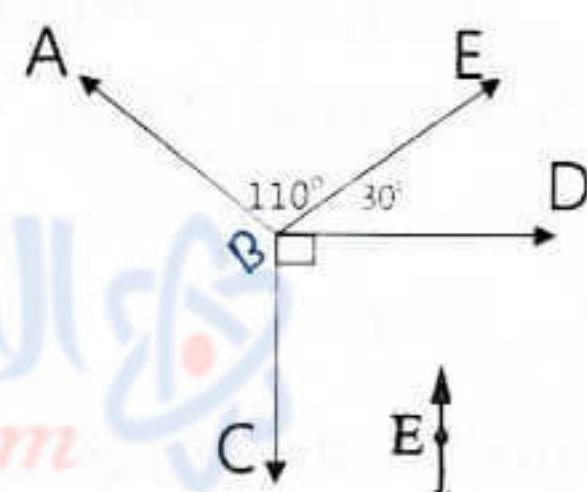
5) a- In the opposite figure:

$\overrightarrow{AB}$ // $\overrightarrow{CD}$, m(<EAC) = 130° and m(<EAB) = 90°

Then find m(<C)
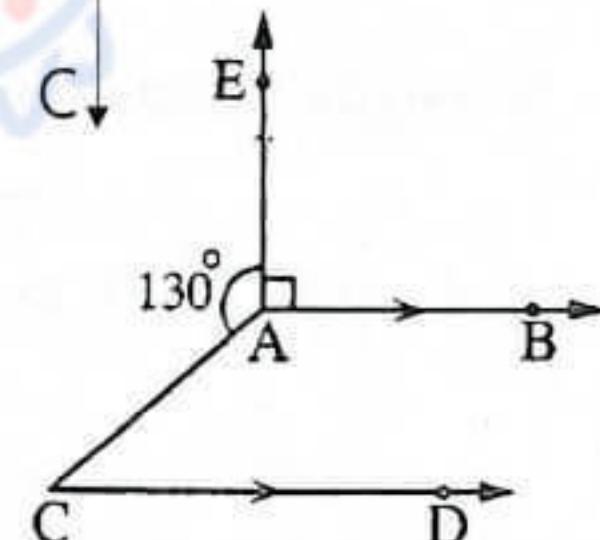
b- Using the ruler and the compasses , draw Δ ABC in which AB = AC = 5 cm. , BC = 8 cm. ,then draw $\overrightarrow{AD}$ ⊥ $\overline{BC}$ to cut $\overline{BC}$ at D.

Find the length of AD. (don't remove the arcs)

2

Arwa Hossam

Subject : Geometry
Grade : 1ˢᵗ Prep
Time: 2 hours

First Term Exam 2019/ 2020

Answer the following questions

(The exam in two papers)
((Allowed to use a calculator))

Q1 : Choose the correct answer :

1) If polygon ABCD ≡ polygon XYZL, then AD = ...
   a) XY
   b) YZ
   c) LZ
   d) XL

2) The diagonals are perpendicular in ....
   a) Parallelogram
   b) rhombus
   c) rectangle
   d) trapezium

3) $\vec{AB} \cup \vec{AC}$ = ...
   a) $\vec{AB}$
   b) $\overline{AB}$
   c) ∠ BAC
   d) ∅

4) If m(∠ X) = 2 m(∠ Y) , ∠ X and ∠ Y are two complementary angles ,
   Then   m(∠ Y) = ...
   a) 30°
   b) 45°
   c) 60°
   d) 90°

5) The number of triangles in the figure equals ....
   a) 4
   b) 6
   c) 7
   d) 8

6) If two straight lines are parallel to a third straight line, then these two
   straight lines are ....
   a) perpendicular
   b) parallel
   c) congruent
   d) intersecting

Q2: Complete each of the following :

1) If △ ABC ≡ △ XYZ, m (∠ X) = 40° , m (∠ C) = 60°, then m (∠ Y) = 80...°

2) If the perimeter of an equilateral triangle is 36 cm, then its side length is 12..cm

3) The perpendicular bisector of a line segment is called..axis of symmetry

4) If two straight lines intersect ,then each two vertically opposite angles are equal meu

5) The two right –angled triangles are congruent if the..hypotneuse.............
and a side of one triangle are congruent to the corresponding element
in the other triangle.

بقية الاسئلة فى الورقة الثانية

منتدى الامتحان التعليمى

Q3 (In the opposite figure:

$m(\angle AMB) = 60°$, $m(\angle AMD) = 90°$, $m(\angle BMC) = 110°$.

Find $m(\angle CMD)$ $360 - (60 + 90 + 110) = 360° - 260° = 100°$

[b] In the opposite figure:

$\overrightarrow{AF} // \overrightarrow{DE} // \overrightarrow{BC}$,

$AD = DB$, $AE = 4cm$

Find the length $\overline{AC}$ (Give reason)
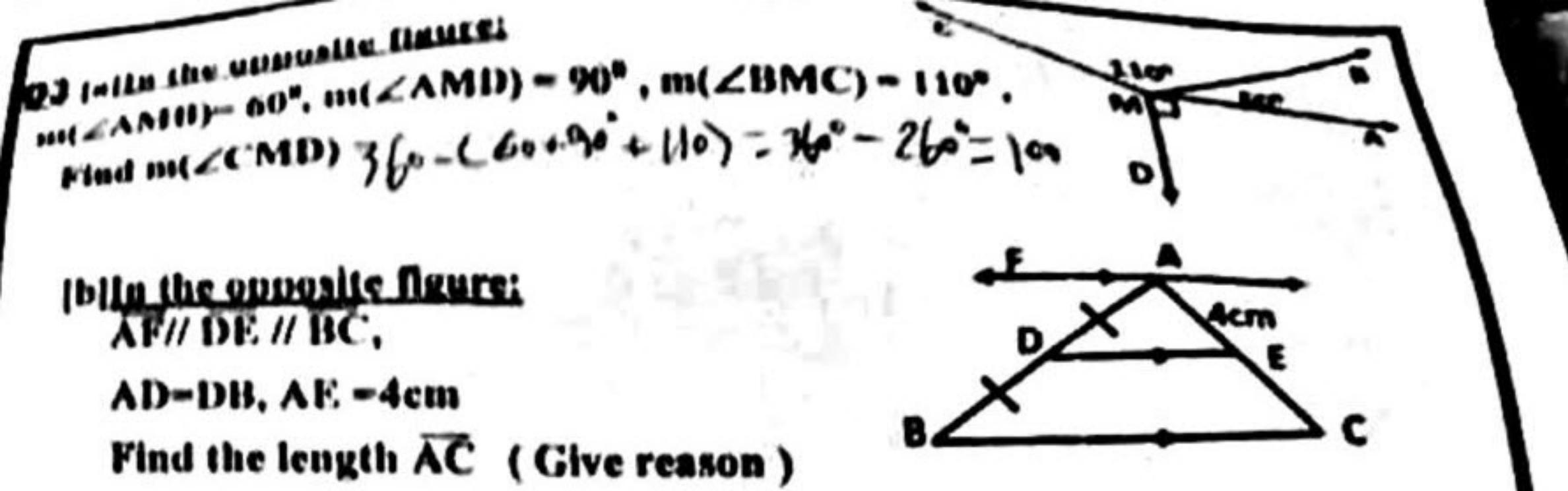
Q4 [a] By using you geometric instrument draw the triangle ABC where

$AB = 3cm$, $BC = 4cm$, $AC = 5cm$, then bisect $\angle B$. (Don't remove the arcs)


[b] In the figure opposite:

$AB = CB$, $AD = CD$

, $m(\angle ABD) = 40°$, $m(\angle CDB) = 30°$

(1) Is $\triangle ABD \equiv \triangle CBD$? Why?

(2) find $m(\angle A)$
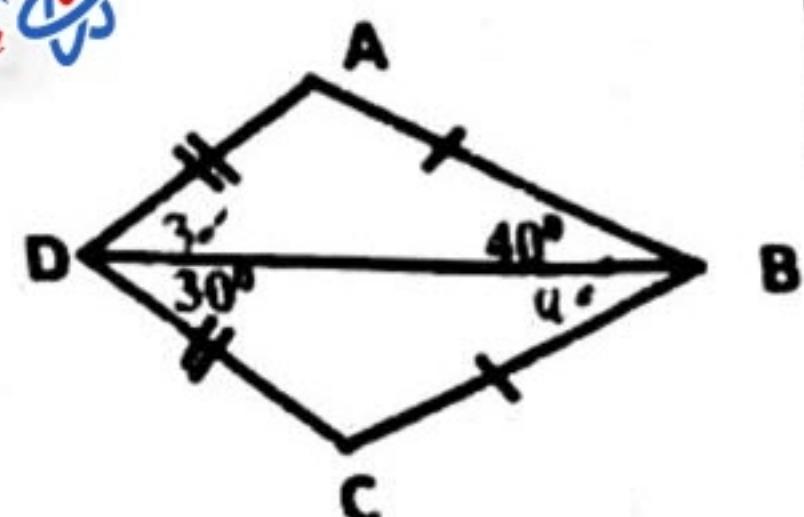
Q5 [a] In the figure opposite :

$\overrightarrow{AB} // \overline{DC}$, $m(\angle A) = 60°$, $m(\angle D) = 120°$

1) Find $m(\angle C)$ 2) Is $\overrightarrow{AC} // \overrightarrow{DE}$? why ?
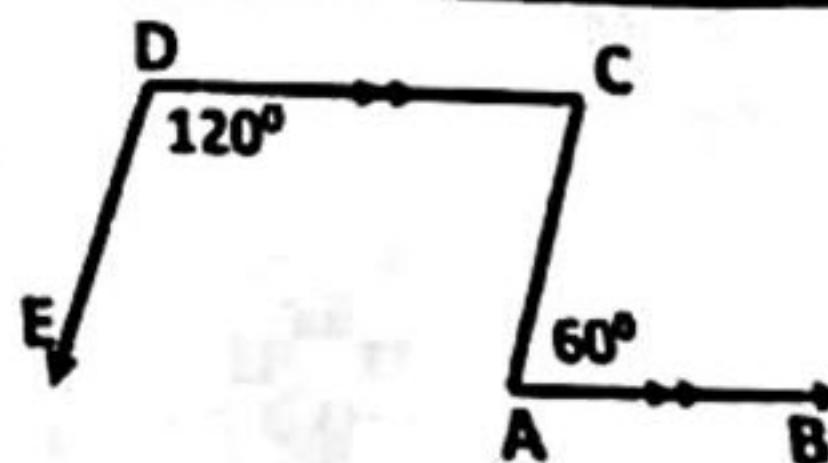
[b] In the figure opposite :

$\overline{AD} \cap \overline{BC} = \{ M \}$

$BM = MC$, $AM = MD$

S. A. S

Write the conditions for $\triangle AMB$, $\triangle DMC$

To be congruent ?
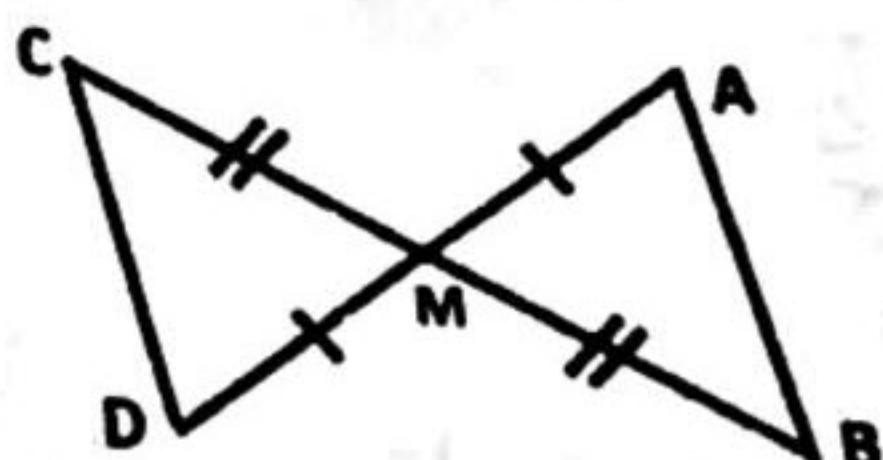
انتهت الاسئلة

With my Best wishes

Beni-suef governorate
Directorate of official language school
Education administration

subject : geometry
prep. : First form
time : 2 hours

First term exam 2018 / 2019

First question: Choose the correct answer.

1) In the opposite figure:

If $A \in \overrightarrow{BC}$ and $m(\angle CAD) = 120°$

then $m(\angle BAD) = $ ....°

a) $30°$ b) $60°$ c) $90°$ d) $120°$
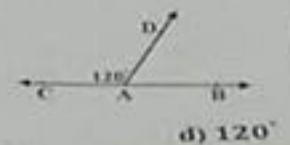
2) If $m(\angle A) = 90°$, then $m(\text{reflex} \angle A) = $ ....°

a) $0°$ b) $90°$ c) $180°$ d) $270°$

3) If $\triangle ABC \equiv \triangle XYZ$, then $AB = $ ....

a) BC   b) YZ   c) XZ   d) XY

4) In $\triangle ABC$, if $m(\angle A) + m(\angle B) = 130°$, then $m(\angle C) = $ ....°

a) $40°$ b) $50°$ c) $65°$ d) $130°$

5) The angle whose measure is more than $90°$ and less than $180°$ is called ...... angle

a) an acute   b) a right   c) an obtuse   d) a reflex

6) The number of triangles in the figure ☒ equals ....

a) 4   b) 6   c) 7   d) 8

Second question: Complete:

1) The angle whose measure is $50°$ complements an angle of measure .... and supplements an angle of measure ....

2) If the polygon $ABCD \equiv$ the polygon $XYZL$, then $\overline{DA} \equiv$ .... ,
$m(\angle BCD) = m(\angle ....)$

3) Two triangles are congruent if each .... of one triangle is congruent to the corresponding .... of the other triangle

4) The straight line that is perpendicular to one of two parallel lines is .... to the other

5) The perpendicular bisector of a line segment is called ....

Seba mohamed

Third question: a) Using the geometric instruments , Draw $\triangle ABC$ in which $AB = AC = 4$ cm. , $BC = 5$ cm. , then bisect $\angle B$ by a bisector $\overrightarrow{BD}$ where $D \in \overline{AC}$

(Don't remove the arcs)

b) In the opposite figure:

M is the point of intersection of $\overleftrightarrow{AC}$ and $\overleftrightarrow{BD}$

, $\overrightarrow{ME}$ bisects $\angle AMD$ and $m(\angle BMC) = 120°$

Find: $m(\angle AMD)$ and $m(\angle EMD)$ (give reason)
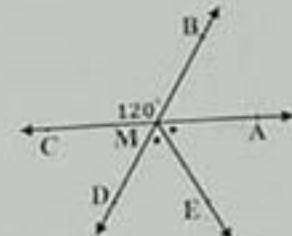
Fourth question:

a) In the opposite figure:

$CB = CD$, $\overline{AC} \perp \overline{BD}$, $AB = 5$ cm.

and $m(\angle B) = 57°$

Study the case of congruency , then deduce $m(\angle ADC)$, the length of $\overline{AD}$
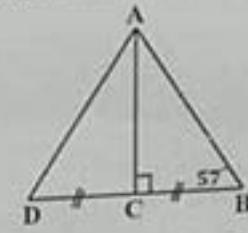
b) In the opposite figure:

$\overline{AB} \cap \overline{CD} = \{E\}$, $AE = ED$

and $m(\angle A) = m(\angle D)$

mention the conditions for $\triangle ACE$, $\triangle DBE$ to be congruent

---
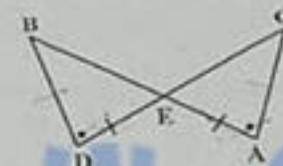
Fifth question:

a) In the opposite figure:

$\overrightarrow{AD} \parallel \overline{BC}$, $m(\angle DAB) = 50°$ and $m(\angle DAE) = 70$

Find : 1) $m(\angle C)$ 2) $m(\angle B)$

b) In the opposite figure:

$\overleftrightarrow{AF} \parallel \overleftrightarrow{DE} \parallel \overleftrightarrow{XY} \parallel \overleftrightarrow{BC}$, $AC = 18$ cm.

and $AD = DX = XB$

Find the length of $\overline{EC}$ (give reason)

Alexandria Governorate

A gamy Educational Zone

Inspector of math's

امتحان الفصل الدراسي الأول

٢٠١٨ / ٢٠١٧

First Preparatory grade

Subject/ geometry

Time (two hours)
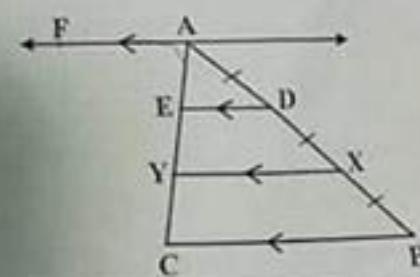
(1) **Complete :**

1) The acute angle complements ...*acute*...... angle.

2) If the two straight lines intersect, then each two vertically opposite angles are ...*equal*...... In measure.

3) The two bisectors of two adjacent supplementary angles are .... V.O.A

4) If the perimeter of a square is 28 cm, then its area = ...*49*...... cm²

5) The perpendicular on the midpoint of a line segment is called .... *right angle*

(2) **Choose the correct answer :**

1) If△ ABC =△XYZ   m (<x) + m (<Z) = 130,   then m (<B) = ...

   (30°, **60°**, 75°, 100°)

2) The measure of straight angle = ... °

   (90°, 120°, 75°, **180°**)

3) If two straight lines are parallel to a third straight line, then the two straight lines are ....

   (**Parallel**, perpendicular , equal , intersecting)

4) If m (<A) = 90°, then m (reflex <A) = ...

   180   (**270°**, 180°, 90°, 0°)

5) If the ratio between two supplementary angle 2:3 then the measure of the smaller angle = ...   a¹ : a² : Sum   S = $\frac{180 \times 2}{5}$ =

   2 : 3 + 5

   x + y = 180   (20°, **72°**, 36°, 108°)

6) The sum of measure of the accumulative angles at a point equal

   ....   (180°, **360°**, 90°, 270°)

(3) **(A) In the opposite figure :**

If $\overline{MB} \cap \overline{AC} = \{ M \}$, m (< AMB) = 60°, m(<BMC)=3X°

then find the value of X

$3x + 60 = 180$

$3x = 180 - 60$

(B) In the opposite figure: $3x = 120$

$x = \dfrac{120}{3} = 40°$
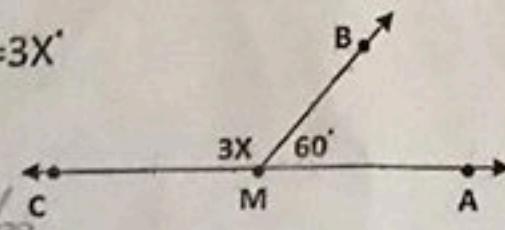
m (<AMB) = 110°, m (<AMD) = 90°, m (< DMC) = 40°

Find m (< BMC) $360 - (110 + 40 + 90)$

$= 120°$

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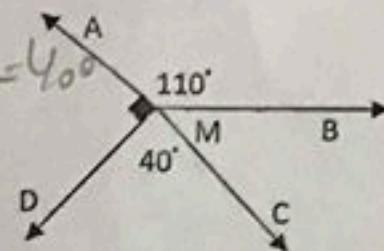
(4) **(A)** by using your geometric instruments draw

< ABC whose measure 80°, Draw $\overrightarrow{BF}$ to bisect the angle .

(B) In the opposite figure:

$\overline{AD} // \overrightarrow{BE}$, $\overrightarrow{CF}$ bisect < DCE, E ∈ $\overrightarrow{BC}$

m (<ABC) = 55°, m (< ADC) = 110°

Is $\overline{AB} // \overrightarrow{CF}$?, why? yes
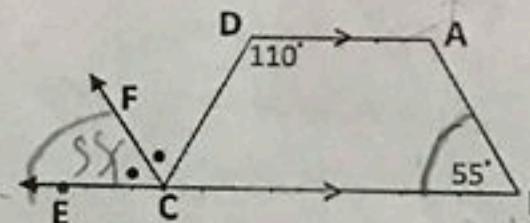
(corresponding)

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(5) **(A)** State three cases of congruency of two triangles.

(B) In the opposite figure:

m(<DBA) = 30°, m (<C) = 110°

Does △ ABD ≅ △ACB ?   Why?

Then find m (<D) , m (< CAB) .

$180 - (110 + 30)$

$= 180 - 140$

$= 40°$

Alexandria Governorate
East Educational Zone
Mathematics directing

First Term exam for
English language schools
January - year 2017 - 2018

Grade : Middle one.
Time : Two hours
Subject : Geometry
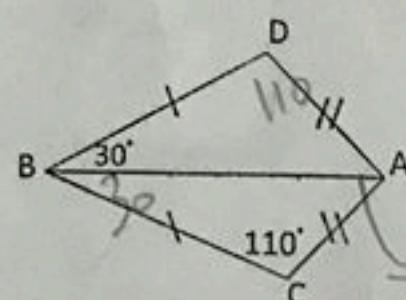
⟾ هذا الاختبـــار في ورقتيـــن ⟾

Answer the following questions   Allows the use of a calculator

1ˢᵗ question: Choose the correct answer from those given:

1) The measure of the supplementary of the angle of measure $30° =$ .... °.
   { 30 , 60 , 120 , 150 }

2) The image of the point A(- 4 , 3) by transformation (- 1 , - 4) is ......
   { (-5, -7) , (-5,-1) , (-7,3) , (-3,-1) }

3) If two lines are perpendicular to a third line, then they are ......
   {Perpendicular , intersecting , parallel , congruent}

4) If the ratio between the measure of two supplementary angles is 7:11 then
   the measure of the smaller = ... °
   {35 , 55 , 70 , 110 }

5) The length of the diameter of a circle = 8 cm. then its area = ... π
   { 4 , 8 , 16 , 64 }

6) If $\triangle ABC \equiv \triangle XYZ$ then ....
   { AX = YZ , BC = XZ , XY = CA , $\underline{ZY = CB}$ }

2ⁿᵈ question: Complete the following :

1) If a straight line intersects two parallel lines then each two corresponding ang[le]
   are ......

2) Two triangles are congruent if two sides and .... in one are congruent to
   their corresponding parts in the other.

3) If $m(\angle A) = 110°$ then $m(reflex \angle A) = ...$°

4) If the length of a side in a cube = 6 cm. then its total surface area = ...c[m]

5) If $\triangle ABC \equiv \triangle XYZ$, $m(\angle A) + m(\angle B) = 140°$, then $m(\angle Z) = ...$°

3ʳᵈ question: a) In the opposite figure:

$m(\angle AMB) = \overset{90}{110}°$, $m(\angle AMD) = 90°$, $m(\angle CMB) = 40°$

Find $m(\angle CMD)$ by steps.
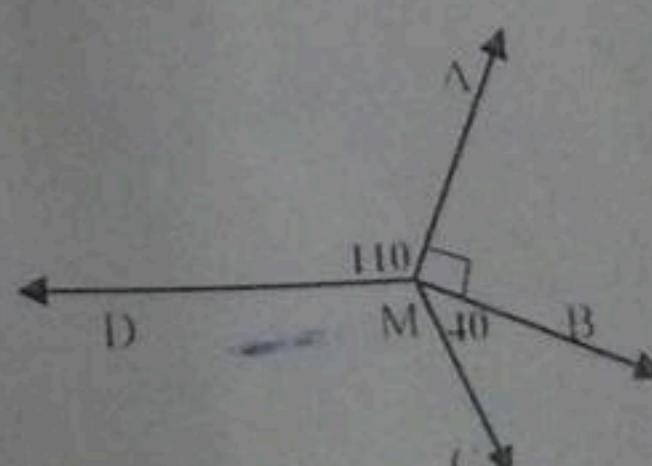
b) Using the geometric instruments draw angle ABC of measure $120°$ and bisect
$\overline{BD}$ then find by measuring m $\angle ABD$ (don't remove the arcs)

بقية الاسئلة في الورقة
الثانية

4th question:

a) In the opposite figure $AF \parallel DE \parallel XY \parallel BC$,
AD=DX=XB, AC=9CM.
Find the length of AY giving the reason.
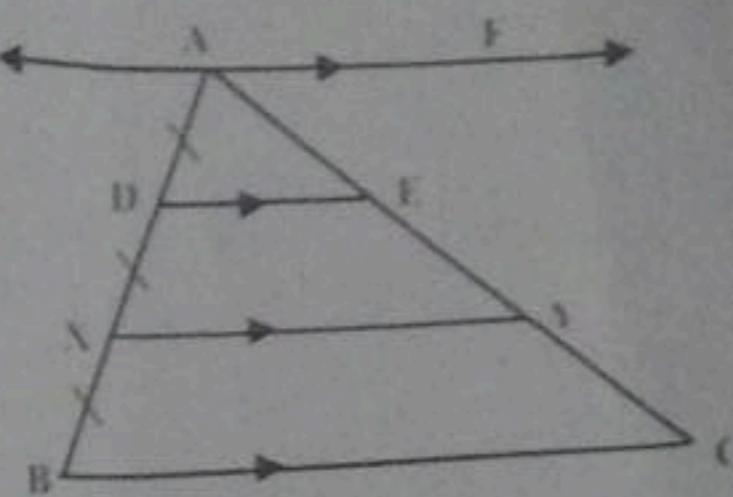
b) In the opposite figure:
CD = AD , AB = 5 cm. ,
$m(\angle BAD) = m(\angle BCD) = 90^0$
1) Deduce that $\triangle ABD \equiv \triangle CBD$
2) Find the length of $\overline{CB}$

5cm
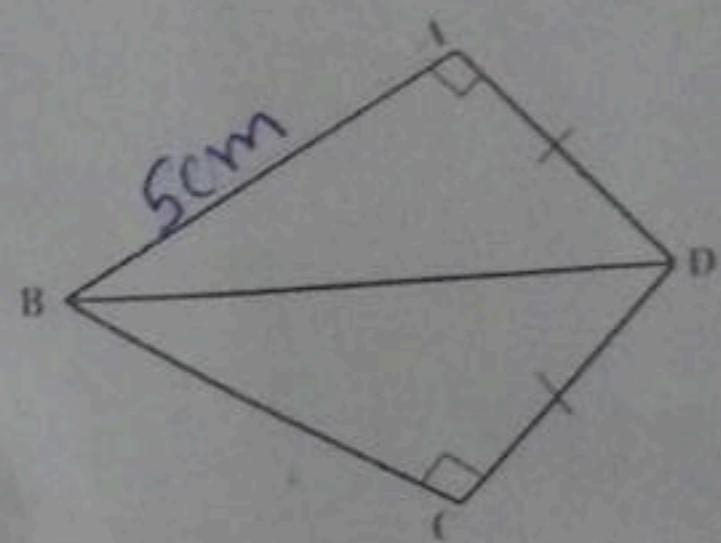
5th question:

a) In the opposite figure:
$BA \parallel CD , CD \parallel EF \quad m(\angle ABC) = 85^0$
Find $m(\angle CEF)$

85
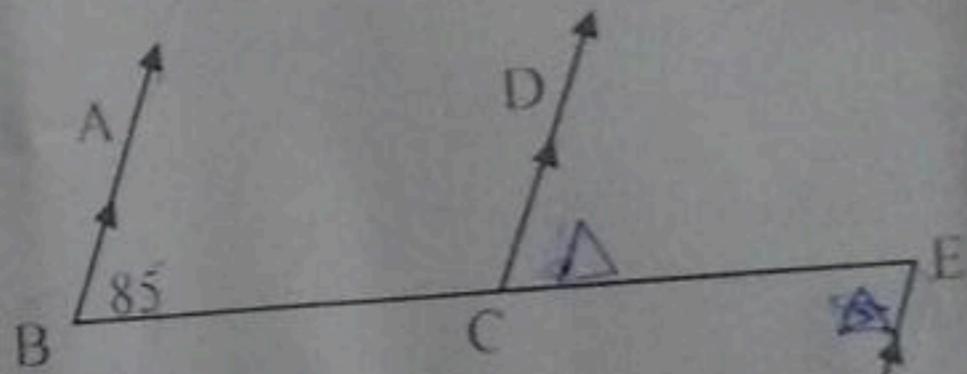
b) In the opposite figure:
AB = AD , BC = DC
Deduse that AC bisects $\angle BAD$
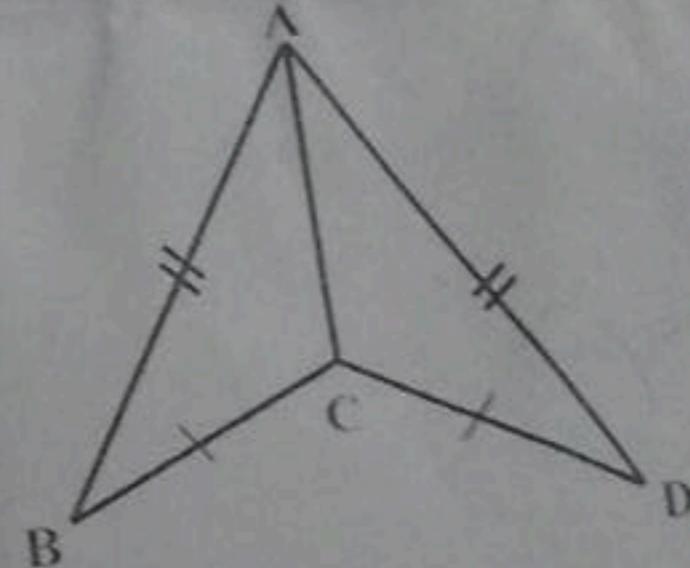
انتهت الاسئلة

Final exam of geometry 2017/2018
First term
(Answer all the following questions)

1) Choose the correct answer :

1) The acute angle supplements .... angle .

a) acute   b) obtuse   c) right   d) reflex

2) If two adjacent angles are supplementary, then their outer sides are ....

a) parallel   b) perpendicular   c) congruent   d) on the same straight line

3) If $\overline{AB} \equiv \overline{XY}$, then AB - XY = ...

a) 0   b) 1   c) -1   d) 2

4) Which of the following sentences is wrong for all rectangles?

a) Opposite sides are congruent

b) Opposite sides are parallel

c) All angles are right

d) The diagonals are perpendicular

5) The axis of symmetry of a line segment is the straight line ....

a) perpendicular to it from its midpoint   b) perpendicular to it   c) bisect it   d) parallel to it

6) The best unit to measure the area of a room is ....

a) mm^2 b) cm^2 c) m^2 d) km^2

2) Complete each of the following :

1) The sum of measures of the accumulative angles at a point is ....

2) The two straight lines parallel to a third straight line are ....

3) Two triangles are congruent if two sides and the ....of one triangle are congruent to the corresponding parts of the other triangle .

4) If the ratio between measures of two complementary angles 4 : 5 , then the measure o the smaller angle is ....

5) If the polygon ABCD $\equiv$ the polygon LMNO , then AC = ...

3) a) In the opposite figure :

$\overleftrightarrow{AB} \cap \overleftrightarrow{DE} = \{M\}$, $m(\angle DMB) = 40°$

, $\overrightarrow{MC}$ bisects $(\angle DMA)$ Find with reason :

$m(\angle EMA)$, $m(\angle DMC)$.

40°   70°

b) In the opposite figure :

$\overrightarrow{AB} // \overline{CD}$, $m(\angle BAC) = 110°$

$m(\angle EDC) = 70°$.

1. Find : $m(\angle ACD)$.
2. Is $\overline{AC} // \overrightarrow{DE}$? Why ?

---

4) a) By using the geometrical tools , draw $(\angle ABC)$ of measure $100°$, then bisect it .

(Don't remove the arcs)

b) In the opposite figure :

$m(\angle B) = 30°$, $AB = AD$, $BC = 7cm$

$m(\angle BAC) = m(\angle DAC) = 25°$

Give reasons of two congruent triangles ABC , ADC

Then , find $m(\angle D)$ and the length of $\overline{DC}$.

30°   7cm

5) a) In the opposite figure :

$\overline{AD} // \overline{XY} // \overline{CB}$,

$AX = XB$, $CY = 2$ cm

Find with reason the length of $\overline{CD}$

b) In the opposite figure :

$m(\angle B) = m(\angle D) = 90°$

$EA = CA$, $AD = AB$,

$m(\angle BAC) = 50°$

Deduce : $m(\angle EAD)$

5   0°

Finished

With our best wishes

Final exam of geometry 2017/2018
First term
(Answer all the following questions)

1) Choose the correct answer :

1) The acute angle supplements .... angle .

  a) acute   b) obtuse   c) right   d) reflex

2) If two adjacent angles are supplementary, then their outer sides are ....

  a) parallel   b) perpendicular   c) congruent   d) on the same straight line

3) If $\overline{AB} \equiv \overline{XY}$, then AB - XY = ...

  a) 0   b) 1   c) -1   d) 2

4) Which of the following sentences is wrong for all rectangles?

  a) Opposite sides are congruent   b) Opposite sides are parallel

  c) All angles are right   d) The diagonals are perpendicular

5) The axis of symmetry of a line segment is the straight line ....

  a) perpendicular to it from its midpoint b) perpendicular to it   c) bisect it   d) parallel to it

6) The best unit to measure the area of a room is ....

  a) mm^2 b) cm^2 c) m^2 d) km^2

2) Complete each of the following :

1) The sum of measures of the accumulative angles at a point is ....

2) The two straight lines parallel to a third straight line are ....

3) Two triangles are congruent if two sides and the .... of one triangle are congruent to the corresponding parts of the other triangle .

4) If the ratio between measures of two complementary angles 4 : 5 , then the measure of the smaller angle is ....

5) If the polygon ABCD ≡ the polygon LMNO , then AC = ...

---

3) a) In the opposite figure :
$\overleftrightarrow{AB} \cap \overleftrightarrow{DE} = \{M\}$, m($\angle$DMB) = 40°
, $\overrightarrow{MC}$ bisects ($\angle$DMA) Find with reason :
m($\angle$EMA) , m($\angle$DMC) .

b) In the opposite figure :
$\overrightarrow{AB}$ // $\overline{CD}$, m($\angle$BAC) = 110°
m($\angle$EDC) = 70° .
1. Find : m($\angle$ACD) .
2. Is $\overline{AC}$ // $\overline{DE}$? Why ?
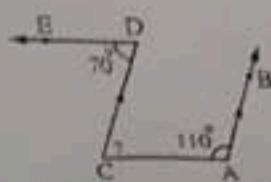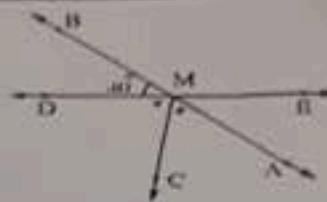
4) a) By using the geometrical tools , draw ($\angle$ABC) of measure 100° , then bisect it .
(Don't remove the arcs)

b) In the opposite figure :
m($\angle$B) = 30° , AB = AD , BC = 7cm
m($\angle$BAC) = m($\angle$DAC) = 25°
Give reasons of two congruent triangles ABC , ADC
Then , find m($\angle$D) and the length of $\overline{DC}$.

5) a) In the opposite figure :
$\overline{AD}$ // $\overline{XY}$ // $\overline{CB}$,
AX = XB , CY = 2 cm
Find with reason the length of $\overline{CD}$

b) In the opposite figure :
m($\angle$B) = m($\angle$D) = 90°
EA = CA , AD = AB ,
m($\angle$BAC) = 50°
Deduce : m($\angle$EAD)
Find :

Finished
With our best wishes
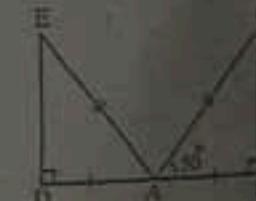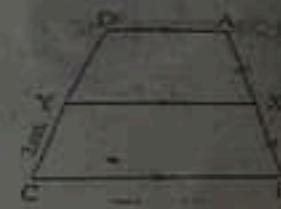
Q1 Choose the correct answer :

1) The measure of the supplement of the angle whose measure $40°$ is ..... $(50 , 140 , 90 , 180)$

2) If two straight lines parallel to a third, then the two straight lines are ....
(parallel , perpendicular , congruent , intersecting)

3) In the opposite figure $m (\hat{x}) =$ ....° $(60 , 30, 90 , 45)$

4) $\overline{AB} \equiv \overline{CD}$, $AB = 5\ cm.$, then $AB - CD =$ ...... $(0 , 1 , 5 , 10)$

5) $\triangle ABC$ is right angled triangle at B , $AB = 3\ cm.$ And $BC = 4\ cm.$, then its area = ...cm^2 $(12 , 6 , 24 , 14)$
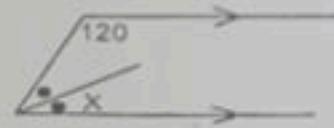
6) The perimeter of the rhombus where its side length $10\ cm.$ = ... $cm.$ $(100 ,50 , 20 , 40)$

**Q2** Complete each of the following:

1) The sum of measures of accumulative angles at a point = ...°

2) Two triangles are congruent if each ....are congruent with corresponding parts of the other

3) The complement of an angle of measure $25°$ is an angle of measure .... °

4) If $\triangle ABC \equiv \triangle XYZ$, then $m(C\hat{B}A) =$ ....

5) $ABCD$ is parallelogram , $m(\hat{A}) = 55°$, then $m(\hat{B}) =$.........°

Q3

a) *In the opposite figure:* $\overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$, $\overrightarrow{ME}$ bisects
$(B\hat{M}D)$ and $m (A\hat{M}D)= 108°$.
Find : $m (B\hat{M}D) , m (E\hat{M}D) , m (A\hat{M}C)and , m (B\hat{M}C)$
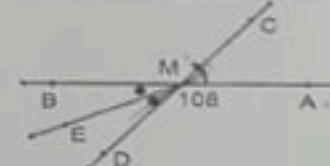
b) *In the opposite figure:*
mention the case and the conditions of congruence between
$\triangle ABC$ and $\triangle EAD$. then Find : $m (E\hat{A}D)$ and $m (E\hat{A}C)$

Q4
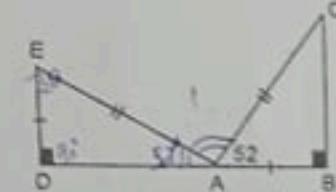
a) *In the opposite figure:* The figure $ABCO \equiv$ the figure
$AFDO$, $O \in \overline{CD}$ and $CD = 8\ cm.$, $m (F\hat{A}B) = 150°$ and
$m (F\hat{D}C) = 120°$
Find : $m (B\hat{C}O) , m (F\hat{A}O), m (A\hat{O}D)$
and the length of $\overline{CO}$
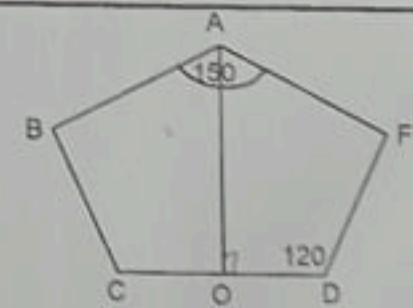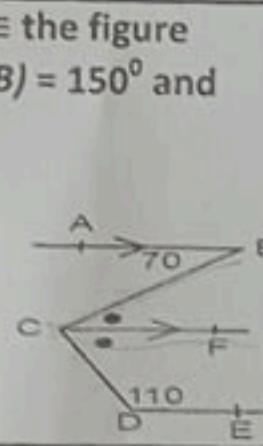
b) *In the opposite figure:* If $\overrightarrow{AB} // \overrightarrow{CF}$
, $m (A\hat{B}C) = 70°$, $m (C\hat{D}E) = 110°$.
Find: $m (B\hat{C}F)$. and why $\overrightarrow{CF} // \overrightarrow{DE}$?

Q5

a) *In the opposite figure:* $\overrightarrow{AF} // \overrightarrow{XY} // \overrightarrow{DE} // \overrightarrow{BC}$,
$AY = YE = EC$, $AY = 4cm.$, $AX = 3cm$ and the
perimeter of $\triangle ABC = 30cm.$. Find the length of $\overline{BC}$
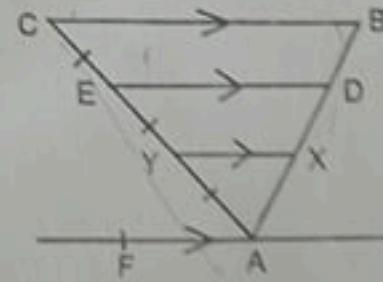
b) Draw $\triangle ABC$ in which AB= 3cm , BC = 5cm , and AC = 7cm ,
then draw $\overline{BD}$ bisect ($A\hat{B}C$) to intersect $\overline{BC}$ at D .
Find by measuring ($A\hat{B}D$).   (don't remove the arcs)